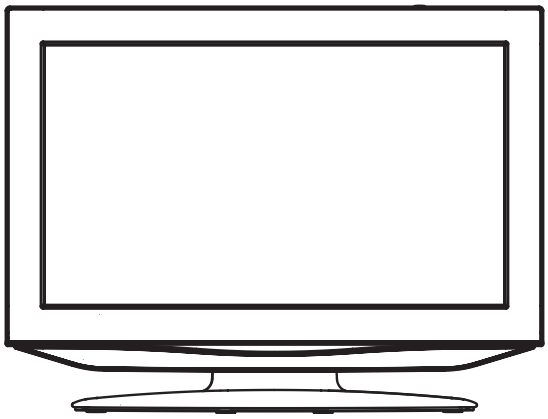
SHARP SERVICE MANUAL

S38OHLC26DV24



LCD COLOR TELEVISION/ DVD VIDEO PLAYER

MODEL LC-26DV24U

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION

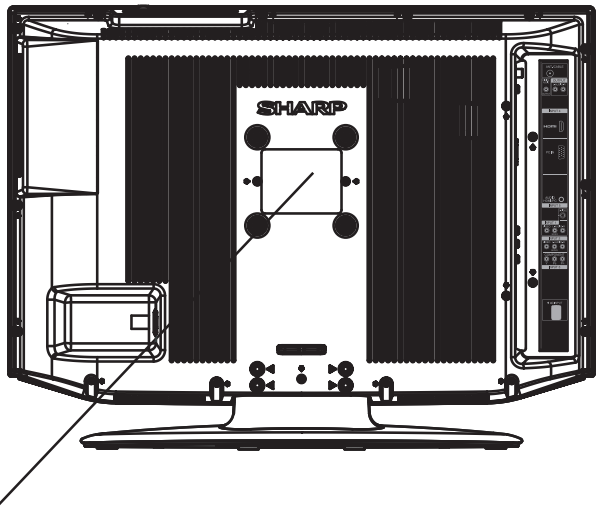
THIS LCD COLOR TELEVISION EMPLOYS A LASER SYSTEM.

TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS SERVICE MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS LASER RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking
The rating sheet and the safety caution are on the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity.
Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened.
Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

IMPORTANT SAFEGUARDS

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3126A

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such a vases, shall be placed on the apparatus.

16) An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.

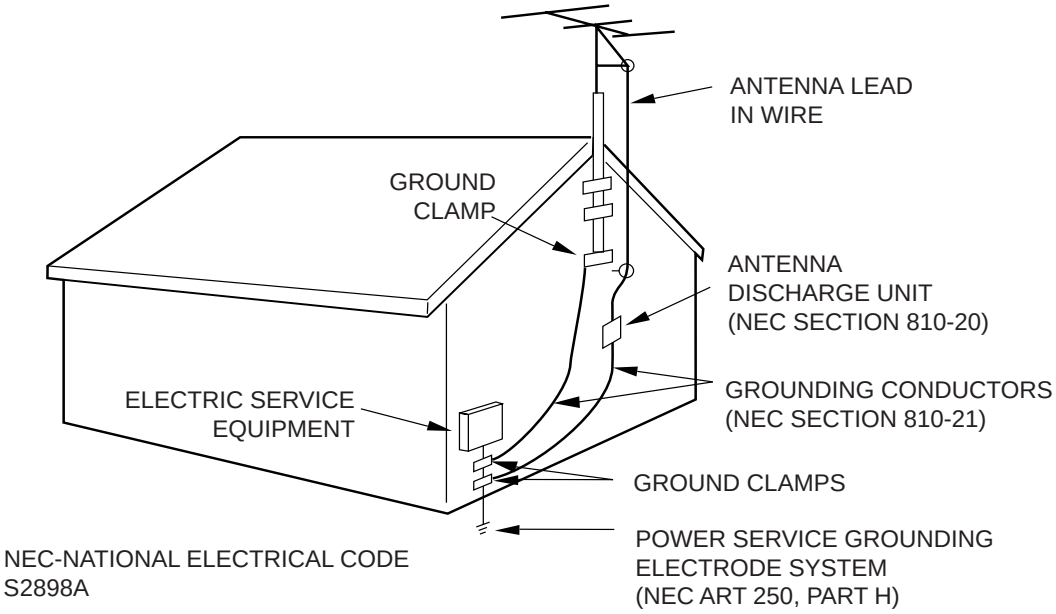
17) Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.

18) Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

IMPORTANT SAFEGUARDS (CONTINUED)

19) If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER THE NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CONDUCTORS (NEC SECTION 810-21)
ELECTRIC SERVICE EQUIPMENT
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC-NATIONAL ELECTRICAL CODE
S2898A

20) When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

21) Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

22) Keep your fingers clear of the disc slot as it is closing. It may cause injury.

23) When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

24) Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

25) Do not allow the product to output distorted sound for an extended period of time. It may cause speaker overheating and fire.

26) When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.

27) Do not look into the opening of the disc slot or ventilation opening of the product to see the source of the laser beam. It may cause eye damage.

28) Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

29) This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CONDENSATION

Moisture will form in the operating section of the player if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, player's performance will be impaired.
To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.
Condensation may also form during the summer if the player is exposed to the breeze from an air conditioner. In such cases, change the location of the player.

HOW TO HANDLE THE LCD PANEL

- Do not press hard or jolt the LCD panel. It may cause the LCD panel glass to break and injury may occur.
- If the LCD panel is broken, make absolutely sure that you do not touch the liquid in the panel. This may cause skin inflammation.
  If the liquid gets in your mouth, immediately gargle and consult with your doctor. Also, if the liquid gets in your eyes or touches your skin, consult with your doctor after rinsing for at least 15 minutes or longer in clean water.

WHEN REPLACING DVD DECK

[When removing the DVD Deck]

Before removing Pick Up PCB and DVD MT PCB connector, the short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

[When installing the DVD Deck]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

NOTE

- Before your operation, please read “PREPARATION OF SERVICING”.
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature: 320 ± 20˚C
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to keep the Flux smoke away from it.

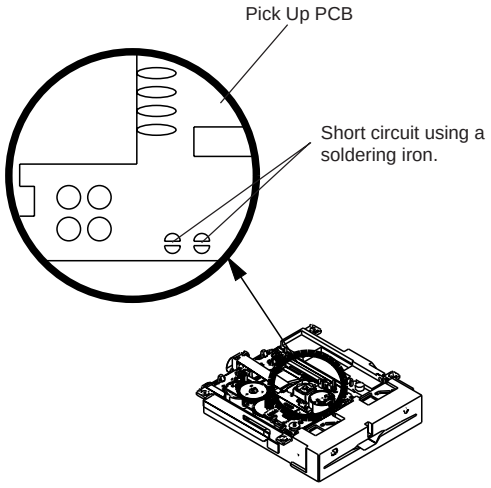


Fig. 1

DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet and Angle Deck. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Slide the Belt Loading toward the arrow direction by hand to release the lock. **(Refer to Fig. 1)**
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

DVD Deck

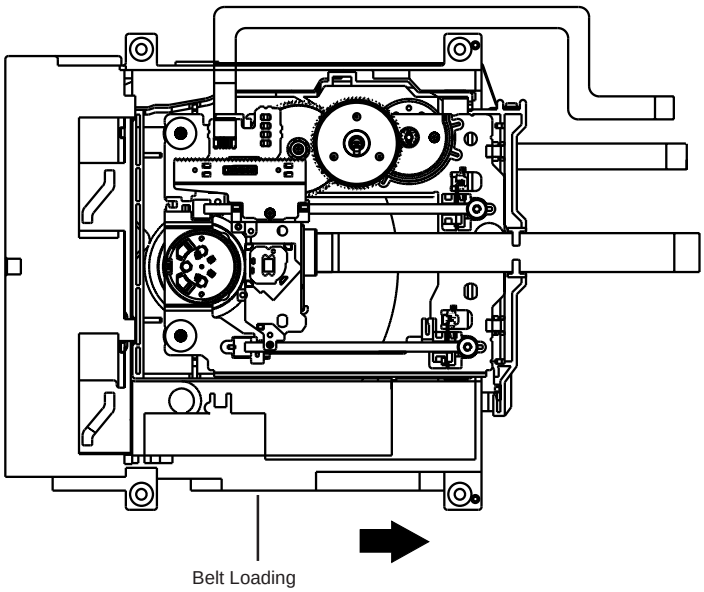
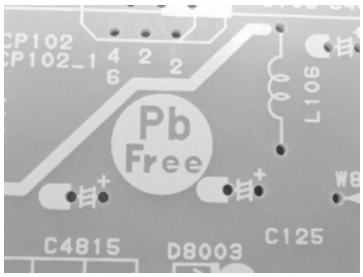


Fig. 1

ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Caution:

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 86°F~104°F(30°C~40°C) higher.
  Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).
  In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

GENERAL SPECIFICATIONS

G-1	**TV System**	LCD	LCD Size / Visual Size		25.5 inch / 647.7mmV
			LCD Type		Color TFT LCD
			Number of Pixels		1366(H) x 768(V)
			View Range	Left/Right	80/80 degree
				Up/Down	80/80 degree
			Bright Dot		--
			Zero Bright Dot Ratio		--
		Color System			NTSC
		Speaker			2 Speaker
			Position		Front
			Size		1.6 x 4.8 inch
			Impedance		8 ohm
		Sound Output	Max		5.0W + 5.0W
			10%(Typical)		---
G-2	**DVD System**	Color System			NTSC
		Disc			DVD, CD-DA, CD-R/RW
					DVD-R/RW (Video Format Only)
		Disc Diameter			120 mm , 80 mm
		Drive			DSM-2
		Search speed	Fwd		4 step
				Actual	2-45 times (DVD)
					4-40 times (CD)
			Rev		4 step
				Actual	2-45 times (DVD)
					4-40 times (CD)
		Slow speed	Fwd		1/7 -1/2 times
				Actual	--
			Rev		1/7 -1/2 times
				Actual	--
G-3	**Tuning System**	Broadcasting System	Analog		US System M
			Digital		ATSC(8VSB)/QAM
		Tuner and Receive CH	System		1Tuner
			Destination		US (W/CABLE)
			CH Coverage		2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+84
		Intermediate Frequency	Digital		44.00MHz
			Analog	Picture(FP)	45.75MHz
				Sound(FS)	41.25MHz
				FP-FS	4.50MHz
		Preset CH			No
		Stereo/Dual TV Sound			US-Stereo
		Tuner Sound Muting			Yes
G-4	**Signal**	Video Signal	Input Level		1 V p-p/75 ohm
			Output Level		--
			S/N Ratio (Weighted)		--
			Horizontal Resolution at DVD Mode		--
					--
		RGB Signal	Output Level		--
		Audio Signal	Input Level		0.85 V p-p/50k ohm
			Output Level	at DVD	0.56 V p-p/ 1k ohm (-20dBFs, 0dBFs=5.6 V p-p)
				at TV	0-1.7 V p-p/1k ohm
			Digital Output Level		0.5 V p-p/75 ohm
			S/N Ratio at DVD (Weighted)		85dB
			Harmonic Distortion		0.02% (1KHz)
			Frequency Response :	at DVD	4 Hz - 44 KHz (96KHz)
				at Video CD	--
				at SVCD	--
				at CD	4 Hz - 20 KHz

GENERAL SPECIFICATIONS

G-5	**Power**	Power Source	AC	120V, 60Hz
			DC	--
		Power Consumption	at AC	120W at 120V 60Hz
			at DC	--
			Stand by (at AC)	1W at 120V 60Hz
			Energy Star	Yes
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
			Safety Circuit	Yes
			IC Protector(Micro Fuse)	Yes
G-6	**Regulation**		Safety	UL(UL6500_2nd)/CSA(E60065_00)
			Radiation	FCC / IC
			Laser	DHHS
G-7	**Temperature**		Operation	+5°C ~ +40°C
			Storage	-20°C ~ +60°C
G-8	**Operating Humidity**			Less than 80% RH
G-9	**Clock and Timer**	Clock		No
		Sleep Timer	Max Time	120 Min
		On Timer	Program	No
		Off Timer	Program	No
		Game Timer		No
		Wake Up Timer		No
		Timer Back-up (at Power Off Mode)	more than	-- Min Sec
G-10	**Remote Control**	Unit		RC-MR
		Glow in Dark Remocon		No
		Remocon Format		SHARP
		Format		TV:SHARP, DVD:KASEIKYO
		Custom Code		TV:SHARP 15bit, DVD:KASEIKYO 48bit
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-3 x 2 pcs
		Total Keys		47 Keys
		Keys	POWER	Yes
			DISPLAY	Yes
			SLEEP	Yes
			VIEW MODE	Yes
			INPUT SELECT	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			MUTE	Yes
			AUDIO	Yes
			VOL+	Yes
			VOL-	Yes
			CH+	Yes
			CH-	Yes
			LEFT/SLOW-	Yes
			ENTER	Yes
			RIGHT/SLOW+	Yes

GENERAL SPECIFICATIONS

			UP	Yes
			DOWN	Yes
			SETUP/TV MENU	Yes
			EXIT/CANCEL	Yes
			RETURN	Yes
			•/SUBTITLE	Yes
			TV/DVD	Yes
			OPEN/CLOSE(EJECT)	Yes
			FWD(SEARCH+)	Yes
			REV(SEARCH-)	Yes
			SKIP+	Yes
			SKIP-	Yes
			PAUSE/STILL	Yes
			PLAY	Yes
			STOP	Yes
			PLAY MODE	Yes
			ANGLE	Yes
			ZOOM	Yes
			DVD MENU	Yes
			TOP MENU	Yes
			REPEAT A-B	Yes
			MARKER	Yes
			DIRECT SKIP(JUMP)	Yes
			FREEZE	No
G-11	**Features (TV)**	Auto Shut Off		Yes
		Auto Search		No
		Power On Memory		Yes
		Comb Filter		Yes 3 -D
		Game Position		No
		Auto Setup(Language/CH Program)		No
		Picture Setting(TV)		Yes
			AV Mode(Picture Preference)	Yes
			Brightness , Contrast , Color	Yes
			Tint	Yes
			Sharpness	Yes
			Color Temperature	Yes
			DNR	Yes
			Cable Clear	No
		Picture Setting(PC)		Yes
			HOR Position , VER Position	Yes
			Phase, Clock	Yes
			Red, Green, Blue	No
			Auto Adjust	No
			Backlight	No
		Audio	MTS	Yes
			Tone Control (Bass/Treble/Balance)	Yes
			Stable Sound	No
			Surround	No
			BBE	No
			SRS WOW (SRS 3D/Focus/Tru Bass)	No
			Variable Audio Out	Yes
		Tuning	CH Program	Yes
			Air/Cable	Yes
			ADD/DELETE	Yes
		Label	CH Label	Yes
			Video Label	Yes
		Favorite CH		No

GENERAL SPECIFICATIONS

	V-Chip		Yes
		Type	USA/CANADA Type
	RRT Setup		Yes
	Lock	Hotel Lock	No
		Channel Lock	No
		Video Lock	No
		Panel Lock	No
	Menu Language		English French Spanish
	Closed Caption		Yes
	CC Advanced		Yes
	View Mode (Picture Size)		Yes
	Picture Scroll		No
	Film Mode		Yes
	Aspect		No
	Backlight		Yes
	PFC(Power Factor circuit)		No
	Freeze frame		No
	PIP/POP		No
	Direct Input Selection		Yes
	Digital Out	Dolby Digital	Yes
		MPEG	No
		PCM	No
		DTS	No
	PC Monitor Input		Yes
		VGA (640x480)	Yes (60Hz)
		VGA (720x400)	Yes (70Hz)
		WVGA (848x480)	No
		SVGA (800x600)	Yes (60Hz)
		XGA (1024x768)	Yes (60Hz)
		WXGA (1280x768)	Yes (60Hz)
		WXGA (1280x720)	Yes (60Hz)
		WXGA (1360x768)	Yes (60Hz)
		SXGA (1280x1024)	No
	HDMI Input		Yes
		VGA (640x480)	Yes (60Hz)
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	No
		720x576i (16:9)	No
		720x576p (4:3)	No
		720x576p (16:9)	No
		1280x720p	Yes (60Hz)
		1920x1080i	Yes (60Hz)
		CEC (ORION Standard)	No
		Deep Color	No
		xvYCC	No

GENERAL SPECIFICATIONS

		Component Input		Yes
			720x480i (4:3)	Yes (60Hz)
			720x480i (16:9)	Yes (60Hz)
			720x480p (4:3)	Yes (60Hz)
			720x480p (16:9)	Yes (60Hz)
			720x576i (4:3)	No
			720x576i (16:9)	No
			720x576p (4:3)	No
			720x576p (16:9)	No
			1280x720p	Yes (60Hz)
			1920x1080i	Yes (60Hz)
		Wall Mount	Size W x H(mm)	Yes (100 x 100)
			Screw Size	M4 x 10
	Features (DVD)	Video CD Playback		No
		SVCD Playback		No
		MP3 Playback		Yes
		JPEG		Yes
		WMA		Yes
		Digital Out	(Dolby Digital)	Yes
			(MPEG)	Yes
			(PCM)	Yes
			(DTS)	Yes
		Down Mix Out	(Dolby Digital)	Yes
			(DTS)	No
		Closed Caption		Yes
		Screen Saver		No
		TV Screen	4:3 (Letter Box/Pan Scan)	Yes
			16:9 (Wide)	Yes
		Audio DAC		192kHz / 24bit
G-12	**Accessories**	Owner's Manual	Language	English/French/Spanish
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
			Terminal	--
		Loop Antenna		No
			Terminal	--
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-3 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord (Flat Polarity Plugs)		Yes
		Cable Cramp		Yes
		Stand		Yes
		Stand Screw		Yes
		Hexagon Wrench		Yes

GENERAL SPECIFICATIONS

		AV Cord (2Pin-1Pin)			No
		Registration Card (NDL Card)			Yes
		300 to 75ohm Antenna Adapter			No
		Sheet Information (Return)			No
		Sheet Information (HDMI)			No
		Cleaning Cloth			No
G-13	**Interface**	Switch	Top	Power (Tact)	Yes
				Channel Up	Yes
				Channel Down	Yes
				Volume Up	Yes
				Volume Down	Yes
				Menu	No
				Play	Yes
				Eject	Yes
				Skip+, Search+	Yes
				Skip-, Search-	Yes
				Still/Pause	No
				Stop	Yes
				Main Power SW	No
				Input Select	Yes
			Rear	Main Power SW	No
		Indicator		Power/Stand-By	Yes (Green / Red)
				Power Wake Up	No
				On Timer	No
		Terminals	Side	Video Input 1	RCA x 1
				Audio Input 1	RCA x 2(L/MONO, R)
				S - Input 1	Yes
				Video Input 2	RCA x 1
				Audio Input 2	RCA x 2(L/MONO, R)
				S - Input 2	No
				Video Output	No
				Audio Output	RCA x 2 (Variable) (L, R)
				Component Input 1	RCA x 3
				Analog Audio	Video Input 2 Audio Input Alternative
				Component Input 2	No
				Analog Audio	No
				HDMI Input 1	Yes
				Analog Audio	PC Monitor Audio Input Alternative
				HDMI Input 2	No
				Analog Audio	No
				Sub Woofer Out	No
				PC Monitor Input	Yes
				Analog Audio	Mini Pin Jack(ϕ 3.5), STEREO
				Digital Audio Output	Coaxial
				DC Jack (Center +)	No
				VHF/UHF Antenna Input	F Type
				Video Input 3	No
				Audio Input 3	No
				S - Input 3	No
				Other Terminal	No
				AC Inlet	Yes

GENERAL SPECIFICATIONS

G-14	**Set Size**		Approx. W x D x H (mm)	663 x 243 x 500
			w/o Handle, Stand Approx. W x D x H (mm)	663 x 116 x 451
G-15	**Weight**		Net (Approx.)	13.5kg (29.8lbs)
			Net w/o Handle, Stand (Approx.)	12.0kg (26.5lbs)
			Gross (Approx.)	16.0kg (35.3lbs)
G-16	**Carton**	Master Carton		No
			Content	--- Sets
			Material	--- / ---
			Dimensions W x D x H(mm)	---
			Description of Origin	---
		Gift Box	Material	Double/Brown
			W/Color Photo Label	No
			W/Handle	No
			Dimensions W x D x H(mm)	762 x 277 x 567
			Description of Origin	Yes
		Drop Test		1 Corner / 3 Edges / 5 Surfaces
			Height (cm)	32
		Container Stuffing (40' container)		516 Sets/40' container
		w/Pallet		No
		w/Wrapping		No
G-17	**Material**	Cabinet	Front	PC+ABS 94V0 NON-HALOGEN
			Rear	PS 94V0 NON-DECABROM
			Jack Panel	--
		PCB	Non-Halogen Demand	No
			Eyelet Demand	Yes
G-18	**Environment**	Environmental standard requirement		Green procurement of SHARP
		Pb-free		Phase3(Phase3A)
			Measures for Whisker	Yes
		Rohs		Yes

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

1-1: BACK CABINET (Refer to Fig. 1-1)

1. Remove the 14 screws (1).
2. Remove the 7 screws (2).
3. Remove the Back Cabinet in the direction of arrow.

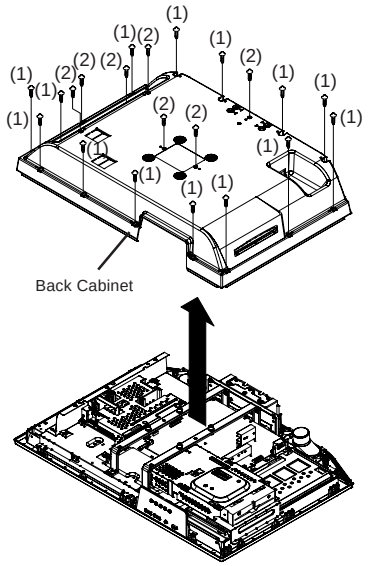


Fig. 1-1

1-2: DVD MT PCB/DVD DECK (Refer to Fig. 1-2)

1. Short circuit the position shown in **Fig. 1-2** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Disconnect the following connectors: **(CP403 and CP4301)**.
3. Remove the 2 screws (1).
4. Remove the 2 screws (2).
5. Remove the DVD Deck in the direction of arrow (A).
6. Remove the 2 screws (3).
7. Remove the Angle MPEG in the direction of arrow (B).
8. Disconnect the following connectors: **(CP2301, CP2302 and CP2303)**.
9. Remove the 4 screws (4).
10. Remove the DVD MT PCB in the direction of arrow (C).
11. Remove the 2 screws (5).
12. Remove the Angle DVD-1 in the direction of arrow (D).

NOTE

1. Before your operation, please read "PREPARATION OF SERVICING".
2. Use the Lead Free solder.
3. Manual soldering conditions
   ï Soldering temperature: 320 ± 20∞C
   ï Soldering time: Within 3 seconds
   ï Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

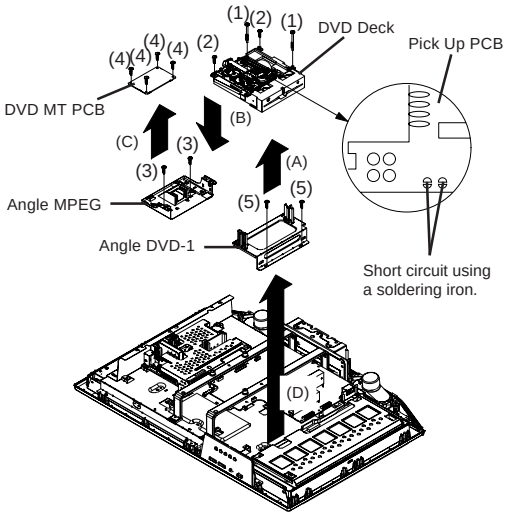


Fig. 1-2

1-3: OPERATION PCB/OPERATION2 PCB and STAND ASS'Y (Refer to Fig. 1-3)

1. Disconnect the following connector: **(CP6202)**.
2. Remove the Plate Button Ass'y in the direction of arrow (A).
3. Remove the 6 screws (1).
4. Remove the Operation PCB and Operation 2 PCB in
5. the direction of arrow (B).
6. Remove the 2 screws (2).
7. Remove the 7 screws (3).
8. Remove the Angle Hinge in the direction of arrow (C).

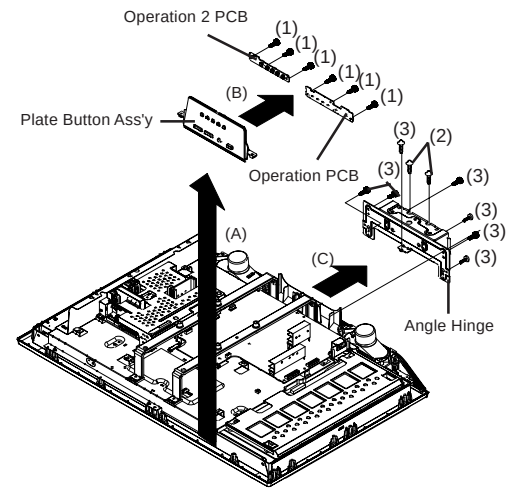


Fig. 1-3

DISASSEMBLY INSTRUCTIONS

1-4: REMOCON PCB (Refer to Fig. 1-4)

1. Disconnect the following connector: **(CP4201)**.
2. Remove the 2 screws (1).
3. Remove the Remocon PCB in the direction of arrow (A).

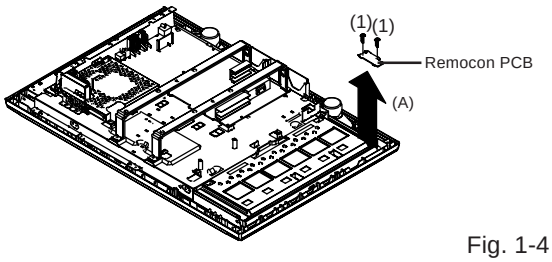


Fig. 1-4

1-5: LCD BLOCK (Refer to Fig. 1-5)

1. Disconnect the following connectors: **(CP302, CP2804 and CP4303)**.
2. Remove the Holder Panel.
3. Remove the 4 screws (1).
4. Remove the LCD Block in the direction of arrow (A).
5. Remove the 4 screws (2).
6. Remove the Angle Main.

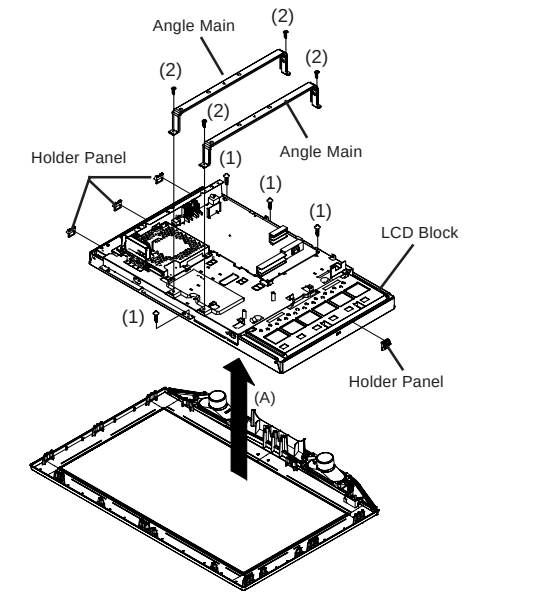


Fig. 1-5

1-6: DIGITAL PCB (Refer to Fig. 1-6)

1. Disconnect the following connector: **(CP3001 and CP4302)**.
2. Remove the screw (1).
3. Remove the 5 screws (2).
4. Remove the 2 screws (3).
5. Remove the screw (4).
6. Remove the Plate Jack in the direction of arrow (A).
7. Remove the 5 screws (5).
8. Remove the Digital PCB and Shield Digital in the direction of arrow (B).

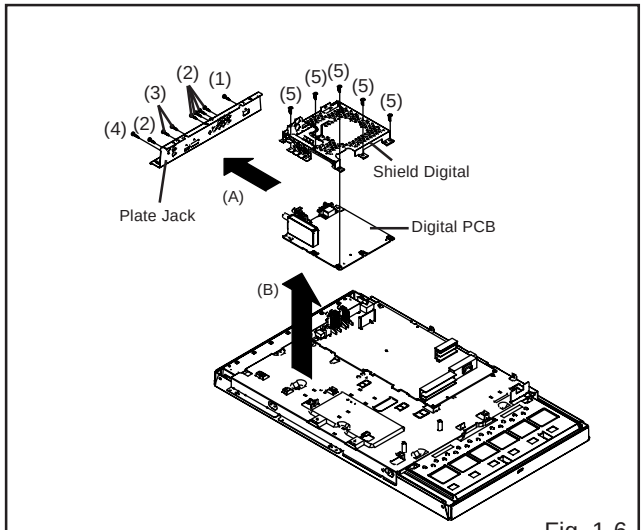


Fig. 1-6

1-7: POWER PCB (Refer to Fig. 1-7)

1. Remove the 5 screws (1).
2. Remove the Power PCB in the direction of arrow.

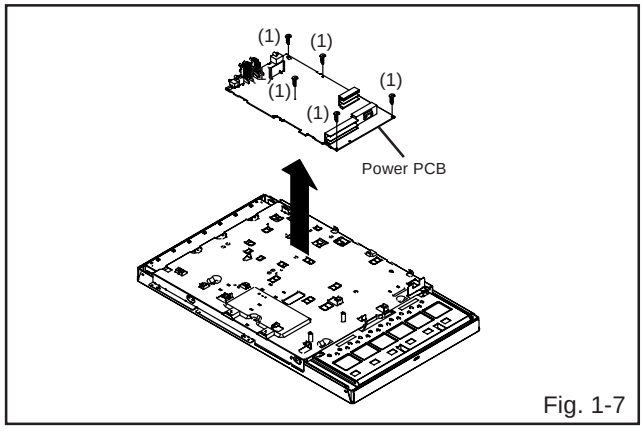


Fig. 1-7

1-8: COVER LCD (Refer to Fig. 1-8)

1. Remove the 4 screws (1).
2. Remove the screw (2).
3. Remove the Cover LCD in the direction of arrow.

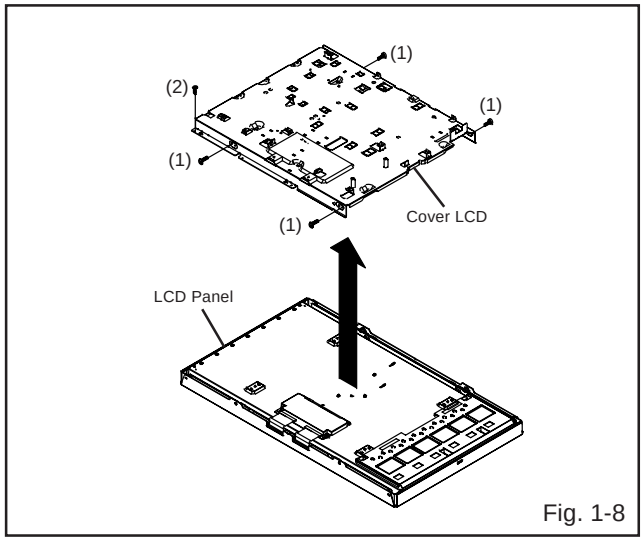


Fig. 1-8

DISASSEMBLY INSTRUCTIONS

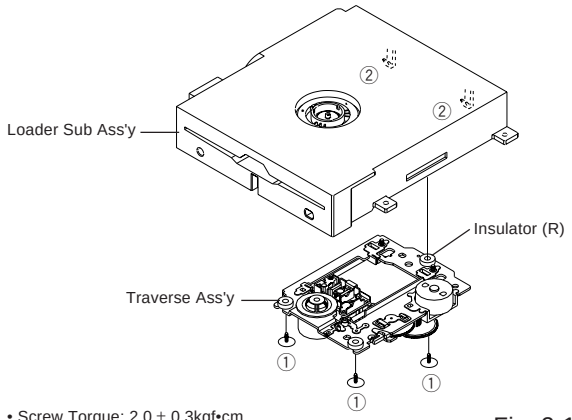
2. REMOVAL OF DVD DECK PARTS

NOTE

1. Disassemble only the DVD DECK PARTS parts listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

2-1: TRAVERSE ASS'Y (Refer to Fig. 2-1-A)

1. Remove the 3 screws ①.
2. Unlock the 2 supports ②.
3. Remove the Insulator (R) from the Loader Sub Ass'y.
4. Remove the Traverse Ass'y.



• Screw Torque: 2.0 ± 0.3kgf•cm

Fig. 2-1-A

NOTE

1. In case of the Traverse Ass'y installation, hook the wire on the Loader Ass'y as shown Fig. 2-2-B to Fig. 2-2-D.

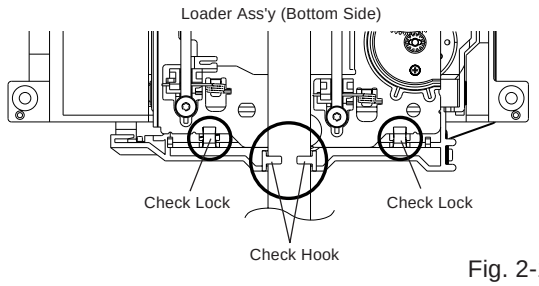


Fig. 2-1-B

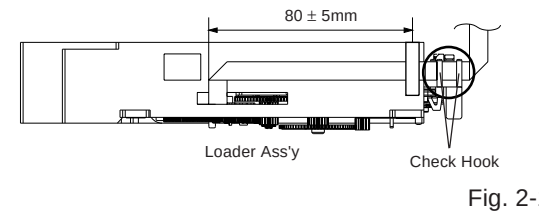


Fig. 2-1-C

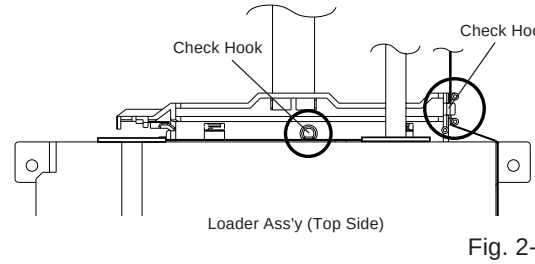
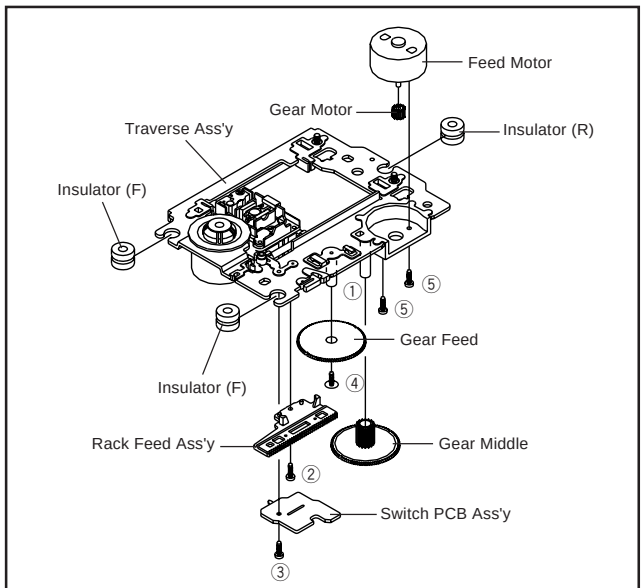


Fig. 2-1-D

2-2: SWITCH PCB ASS'Y/GEAR MIDDLE/GEAR FEED/RACK FEED ASS'Y/FEED MOTOR (Refer to Fig. 2-2-A)

1. Remove the Insulator (F).
2. Remove the Insulator (R).
3. Unlock the support ①.
4. Remove the Gear Middle.
5. Remove the screw ②.
6. Remove the Rack Feed Ass'y.
7. Remove the screw ③.
8. Remove the Switch PCB Ass'y.
9. Remove the screw ④.
10. Remove the Gear Feed.
11. Remove the 2 screws ⑤.
12. Remove the Feed Motor.
13. Remove the Gear Motor.



• Screw Torque: 1.3 ± 0.3kgf•cm (Screw ②)
• Screw Torque: 3.0 ± 0.3kgf•cm (Screw ③)
• Screw Torque: 1.0 ± 0.3kgf•cm (Screw ④, ⑤)

Fig. 2-2-A

NOTE

1. When installing the Rack Feed Ass'y, push both ends to align the teeth as shown Fig. 2-2-B. Then install it.
2. In case of the Gear Motor installation, check if the value of the Fig. 2-2-C is correct.
3. When installing the wire of the Switch PCB Ass'y, install it correctly as Fig. 2-2-D.
   Manual soldering conditions
   • Soldering temperature: 320 ± 20˚C
   • Soldering time: Within 3 seconds
   • Soldering combination: Sn-3.0Ag-0.5Cu
4. After the assembly of the Traverse Ass'y, hook the wire on the Traverse Ass'y as shown Fig. 2-2-E.

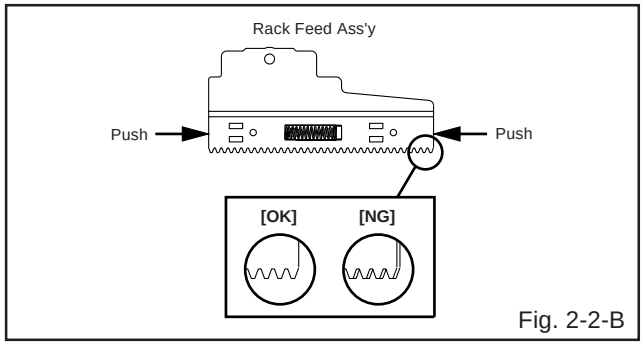


Fig. 2-2-B

DISASSEMBLY INSTRUCTIONS

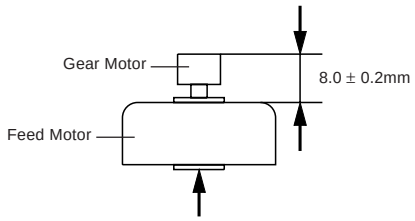


Fig. 2-2-C

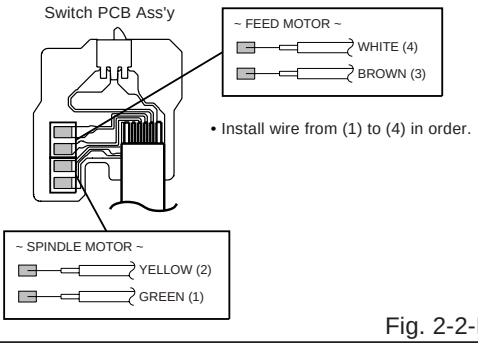


Fig. 2-2-D

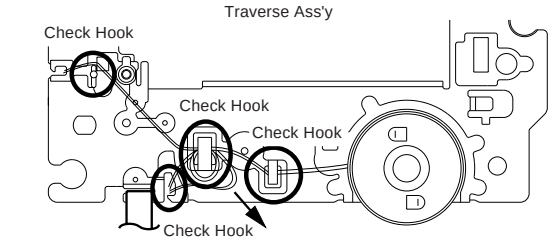


Fig. 2-2-E

2-3: FFC WIRE HANDLING

1. When installing the FFC, fold it correctly and install it as shown from Fig. 2-3-A to Fig. 2-3-B.

NOTE

1. Do not make the folding lines except the specified positions for the FFC.

[24 pin FFC]

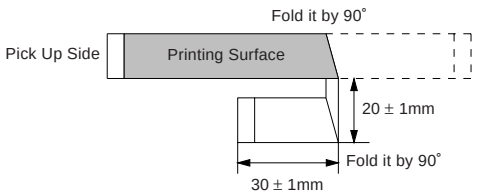


Fig. 2-3-A

[6 pin FFC]

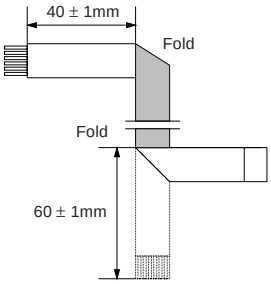


Fig. 2-3-B

DISASSEMBLY INSTRUCTIONS

3. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 3-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

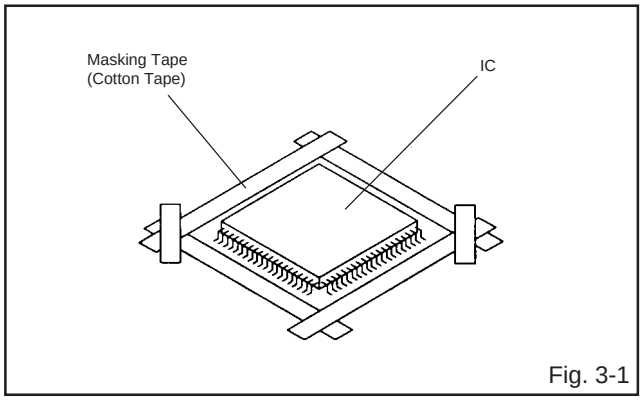


Fig. 3-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 3-2.)**

   NOTE

   Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

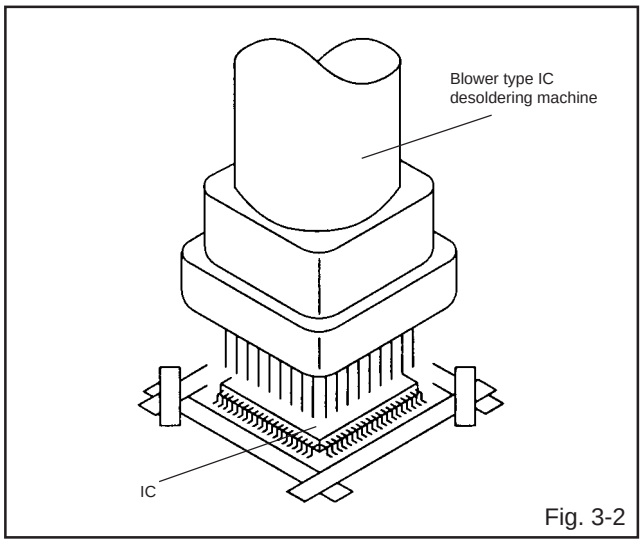


Fig. 3-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 3-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

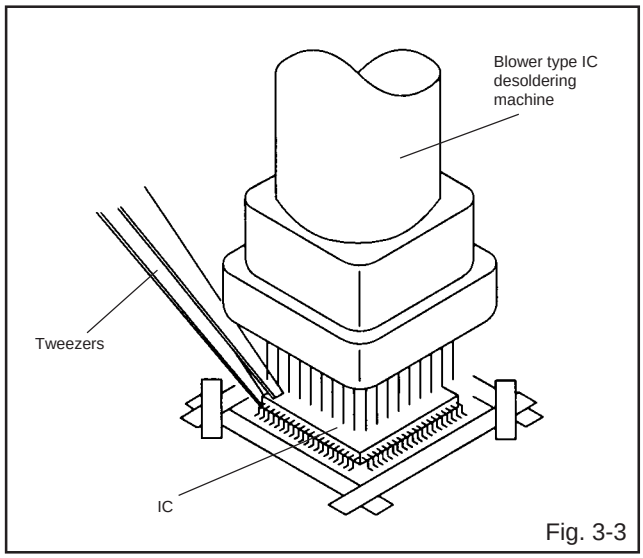


Fig. 3-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 3-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

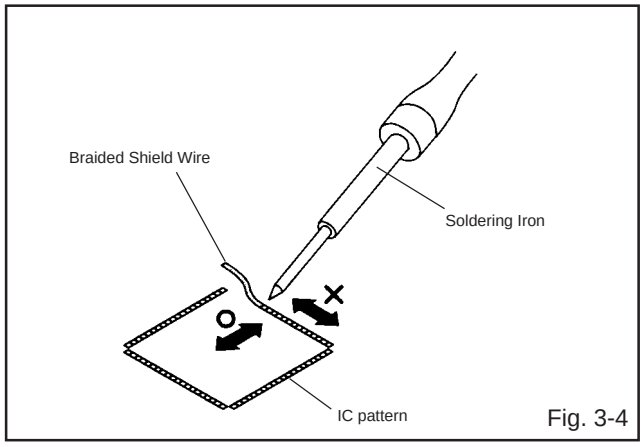


Fig. 3-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 3-5.)**

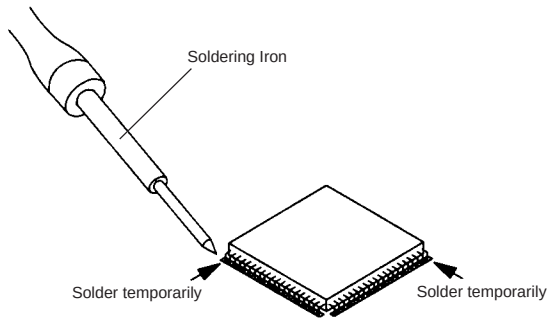


Fig. 3-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 3-6.)**

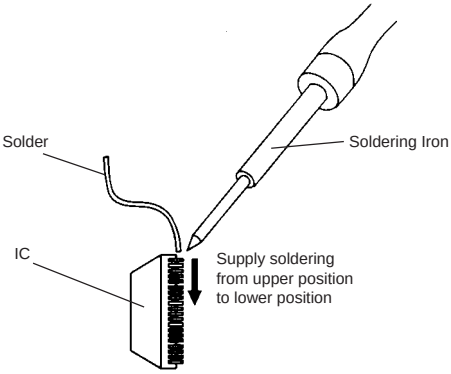


Fig. 3-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 3-7.)**

   NOTE

   Do not absorb the solder to excess.

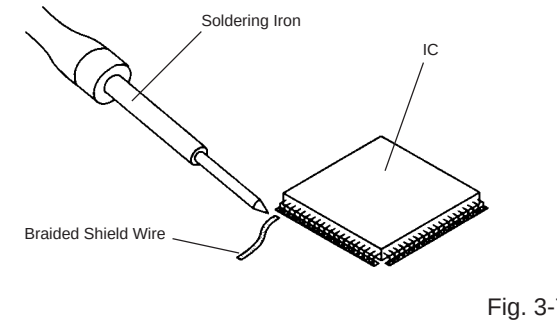


Fig. 3-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 3-8.)**

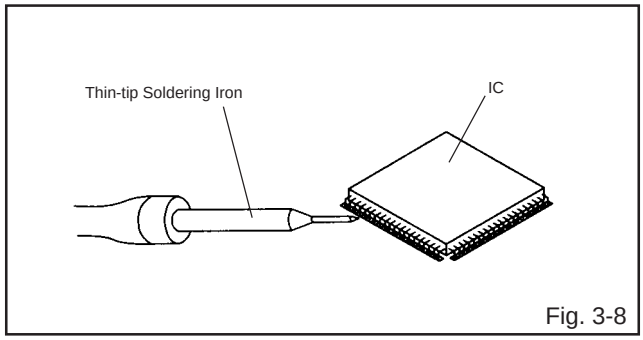


Fig. 3-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

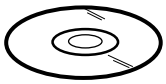
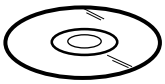
SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	2 sec.	Initialization of factory DVD data.
DVD mode (No disc)	VOL. DOWN (Minimum)	5	2 sec.	DVD Write mode. Refer to the “RE-WRITE FOR DVD FIRMWARE”. NOTE: Do not use this for normal servicing.
TV mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
TV mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	1	2 sec.	Check of the firmware version. Refer to the “RE-WRITE FOR DVD FIRMWARE”. NOTE: Do not use this for normal servicing.

SERVICING FIXTURES AND TOOLS

JG176 Up-Date Disc	JG176 2007 USA DTV LCD Rom Disc
	

Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176123	Up-Date Disc	Up-Date of the Firmware
JG176	APJG176126	2007 USA DTV LCD Rom Disc	Up-Date of the Firmware

RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.

2. Confirm that the “No Disc” will be appeared on the screen.

3. Press both VOL. DOWN button on the set and Channel button **(5)** on the remote control for more than 2 seconds.

4. Press VOL. UP/DOWN button on the unit to check if all the keys on the unit do not function.
   NOTE: To check if DVD Write mode is set.
   When inserting Up-Date Disc at Non DVD Write mode, the read error will happen.

5. Insert the Up-Date Disc. **(Refer to SERVICING FIXTURE AND TOOLS)**

6. Automatic read will start and "Firmware upgrade Programing, Please Wait... Do not switch the player off!" will be displayed on the screen.
   At this time, the horizontal noise lines may appear. But no problem.
   NOTE: Do not turn off the unit on the way or operate the keys on the unit and remocon.
   Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.

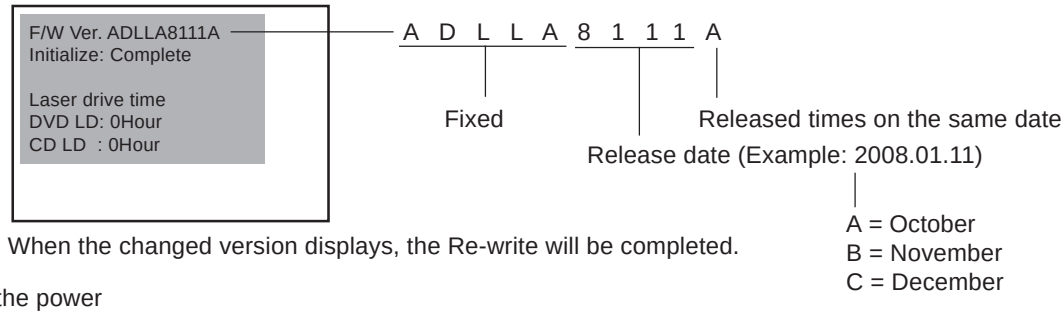
7. After the Up-Date, Logo screen will appear.

8. Unplug the AC cord, then plug it in.

   After the write, set to the initializing of shipping.
9. Turn on the power, and set the DVD mode.
10. Press both VOL. DOWN button on the set and Channel button **(4)** on the remote control for more than 2 seconds.
    The "INITIALIZE 5 ---> COMPLETE" will appear on the screen.

11. Then unplug the AC cord, and plug it in.

    CHECK FOR THE FIRMWARE VERSION
12. Turn on the power, and set the DVD mode.
13. Press both Channel button **(1)** on the remote control and the STOP button on the set for more than 2 seconds.
    Firmware version will be displayed on the top left of the screen.



When the changed version displays, the Re-write will be completed.

14. Turn off the power

RE-WRITE FOR DIGITAL SOFT FIRMWARE

1. Copy the "update.dat" in CD to USB Flash Memory.

   Recommended USB Flash Memory
   - SanDisk Cruzer Mini USB Flash Drive 128Mb
   - SanDisk Cruzer Mini USB Flash Drive 256Mb
   - SanDisk Cruzer Micoro USB Flash Drive 128Mb
   - SanDisk Cruzer Micoro USB Flash Drive 256Mb
   - TwinMos ModileDisk3 128Mb (USB 2.0)
   - TwinMos ModileDisk3 256Mb (USB 2.0)

   NOTE: After Format is done with FAT32 File system beforehand, USB Flash Memory is used. The computer of WINDOWS2000 is used.

2. Confirm that the AC cord is plugged out.

3. Set the minus driver to the topside of the USB connector cover, remove the USB connector cover. Insert the USB Flash Memory to USB connector. **(Refer to Fig.1)**

SET (REAR)

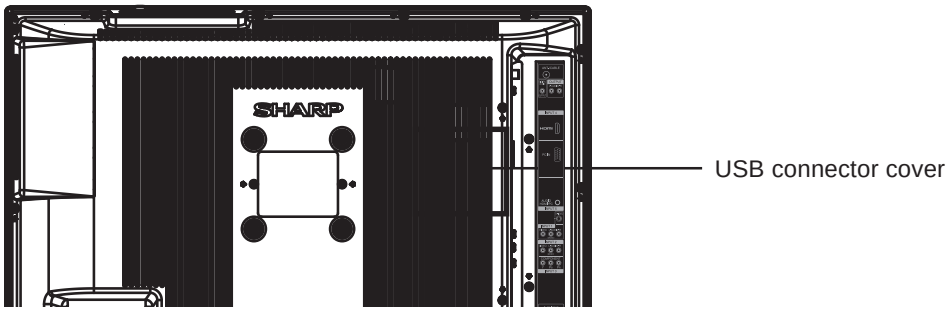


Fig.1

4. Insert the AC CORD of the set and turn on the power. The Up-Date will start automatically. During the writing, "PLEASE WAIT" will appear on the screen.

5. After the Up-Date, the screen will return to normal screen.

6. Turn off the power.

7. Unplug the AC CORD, and remove the USB Flash Memory.

8. Insert the AC CORD again.

   After the data input, set to the initializing of shipping.

9. Turn on the power.

10. Press both Channel button **(1)** on the remote control and the VOLUME DOWN button on the set for more than 2 seconds. The unit will now have the correct DATA for the new DIGITAL SOFT FIRMWARE.

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSIONcan be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".
Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

NOTE:The each item value might be different according to each set.

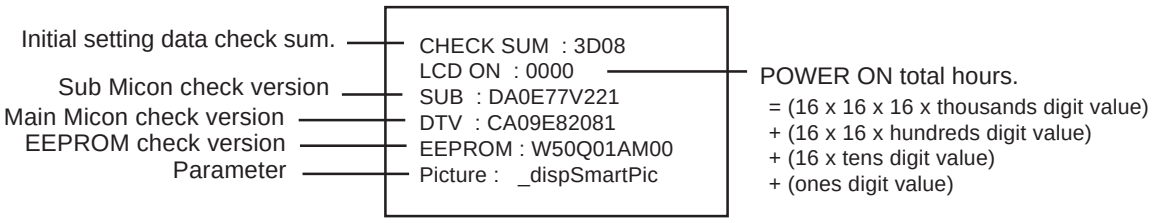

Initial setting data check sum.
Sub Micon check version
Main Micon check version
EEPROM check version
Parameter
CHECK SUM : 3D08
LCD ON : 0000
SUB : DA0E77V221
DTV : CA09E82081
EEPROM : W50Q01AM00
Picture : _dispSmartPic
POWER ON total hours.
= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

FIG. 1

CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 2.

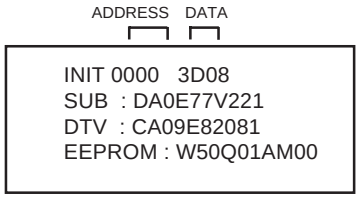


FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN buton on the remote, step through the ADDRESS until Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
6. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 4 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn on the POWER.
10. Set the VOLUME to minimum.
11. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease **(YG6260M)** on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 1-1**.

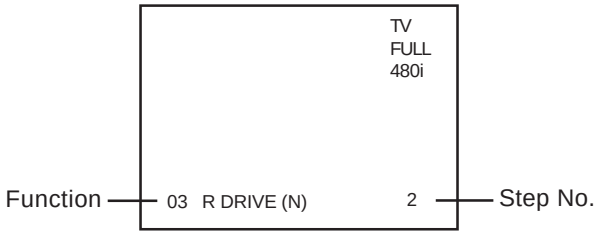


Fig. 1-1

3. Use the CH. UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the SETUP/TV MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for TV, AV, COMPONENT, HDMI and PC mode, press the INPUT SELECT button on the remote control.
6. To display the adjustment screen for DVD mode, press the TV/DVD button on the remote control.
7. Receive the DIGITAL broadcasting.
8. To display the adjustment screen for DTV mode, select the digital channel.
9. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
03	R DRIVE(N)	31	BAK LIGHT MIN
04	R CUT OFF(N)	32	BRIGHTNESS CENT
05	G DRIVE(N)	33	BRIGHTNESS MAX
06	G CUT OFF(N)	34	BRIGHTNESS MIN
07	B DRIVE(N)	35	TINT
08	B CUT OFF(N)	36	SHARP H1 MAX
09	R DRIVE(C)	37	SHARP H1 MIN
10	R CUT OFF(C)	38	SHARP H2 MAX
11	G DRIVE(C)	39	SHARP H2 MIN
12	G CUT OFF(C)	40	SHARP V1 MAX
13	B DRIVE(C)	41	SHARP V1 MIN
14	B CUT OFF(C)	42	CONTRAST CENTER
15	R DRIVE(W)	43	CONTRAST MAX
16	R CUT OFF(W)	44	CONTRAST MIN
17	G DRIVE(W)	45	COLOR CENTER
18	G CUT OFF(W)	46	COLOR MAX
19	B DRIVE(W)	47	COLOR MIN
20	B CUT OFF(W)	50	CONTRAST 40
29	BAK LIGHT CENT		
30	BAK LIGHT MAX		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT SELECT button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-2** and press the channel button **(03)** on the remote control to select "R DRIVE(N)".
6. Press the CH. UP/DOWN button on the remote control to select the "R DRIVE (N)", "R CUT OFF (N)", "B DRIVE (N)", "B CUT OFF (N)", "R DRIVE (C)", "R CUT OFF (C)", "B DRIVE (C)", "B CUT OFF (C)", "R DRIVE (W)","R CUT OFF (W), "B DRIVE (W)" or "B CUTOFF(W)".
7. Adjust the LEFT/RIGHT button on the remote control to whiten the R DRIVE (N), R CUT OFF (N), B DRIVE (N), B CUT OFF (N), R DRIVE (C), R CUT OFF (C), B DRIVE (C), B CUT OFF (C), R DRIVE (W) ,R CUT OFF (W), B DRIVE (W) and B CUTOFF(W) at each step tone sections equally.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-2: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
4. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "121".
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT SELECT button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
10. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "125".
11. Check if the picture is normal.
12. Receive the monoscope pattern. (S-VIDEO Input)
13. Press the INPUT SELECT button on the remote control to set to the AV(S) mode. Then perform the above adjustments 8~11.
14. Playback the DVD(480i) disc. (COMPONENT Input)
15. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
16. Using the remote control, set the brightness and contrast to normal position.
17. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
18. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "126".
19. Check if the picture is normal.
20. Playback the DVD(480i) disc. (HDMI Input)
21. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
22. Using the remote control, set the brightness and contrast to normal position.
23. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
24. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "139".
25. Check if the picture is normal.

2-3: CONTRAST MAX

1. Receive the color bar pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
4. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "153".
5. Check if the picture is normal.
6. Receive the color bar pattern. (VIDEO Input)
7. Press the INPUT SELECT button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
10. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "159".
11. Check if the picture is normal.
12. Receive the color bar pattern. (S-VIDEO Input)
13. Press the INPUT SELECT button on the remote control to set to the AV(S) mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
16. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "164".
17. Check if the picture is normal.
18. Playback the DVD(480i) disc. (COMPONENT Input)
19. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
20. Using the remote control, set the brightness and contrast to normal position.
21. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
22. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "134".
23. Check if the picture is normal.
24. Playback the DVD(480i) disc. (HDMI Input)
25. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
28. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "139".
29. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-4: Confirmation of Fixed Value (Step No.)

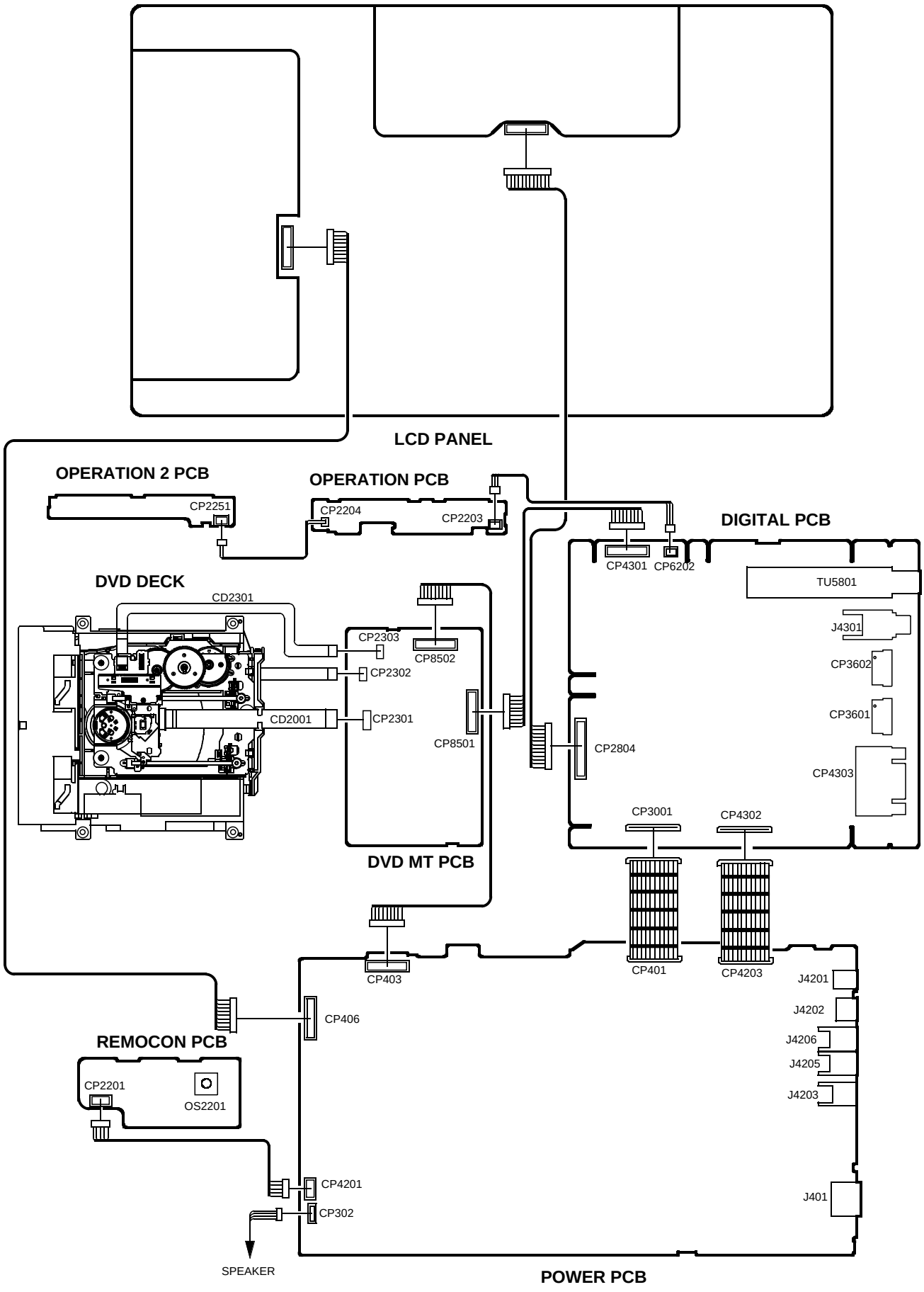
Please check if the fixed values of each of the adjustment item is set correctly referring below. **(TV/AV/COMPONENT/HDMI/DVD/PC/DTV)**

NO.	FUNCTION	TV	AV		GAME	COMPONENT				HDMI							DVD	PC										DTV			
			CVBS	Y/C		480i/576i	480p/576p	720p	1080i	480i/576i	480p/576p	720p	1080i	VGA	640x480	1280x720		640*480	720*400	800*600	1024*768	1280*68	1280*720	852*480	1360*768	1280*1024	1440*900	480i	480p	720p	1080i
		Step No.	Step No.	Step No.	-	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.
1	H POSI OSD	1	1	1	-	1	1	1	1	1	1	1	1	1	-	-	1	1	1	1	1	1	1	-	1	-	-	1	1	1	**1**
2	V POSI OSD	194	194	194	-	194	194	194	194	194	194	194	194	194	-	-	194	194	194	194	194	194	194	-	194	-	-	194	194	194	**194**
3	R.DRIVE (N)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
4	R CUTOFF(N)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
5	G DRIVE(N)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
6	G CUTOFF(N)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
7	B DRIVE(N)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
8	B CUTOFF(N)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
9	R.DRIVE(C)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
10	R CUTOFF(C)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
11	G DRIVE(C)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
12	G CUTOFF(C)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
13	B DRIVE(C)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
14	B CUTOFF(C)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
15	R.DRIVE(W)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
16	R CUTOFF(W)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
17	G DRIVE(W)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
18	G CUTOFF(W)	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
19	B DRIVE(W)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
20	B CUTOFF(W)	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
21	H POSI CENTER	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
22	H POSI MAX	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
23	H POSI MIN	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
24	V POSI CENTER	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
25	V POSI MAX	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
26	V POSI MIN	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
27	H POSI 50	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
28	V POSI 50	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
29	BAK LIGHT CENT	50	50	50	-	50	50	50	50	50	50	50	50	50	-	-	50	50	50	50	50	50	50	-	50	-	-	50	50	50	**50**
30	BAK LIGHT MAX	100	100	100	-	100	100	100	100	100	100	100	100	100	-	-	100	100	100	100	100	100	100	-	100	-	-	100	100	100	**100**
31	BAK LIGHT MIN	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	**0**
32	BRIGHT CENT	123	124	125	-	128	141	133	132	131	131	132	132	135	-	-	124	128	128	128	128	128	128	-	128	-	-	132	131	132	132
33	BRIGHT MAX	200	200	200	-	200	200	200	200	180	180	160	160	180	-	-	200	140	140	140	140	140	140	-	140	-	-	200	200	200	200
34	BRIGHT MIN	60	60	60	-	60	100	60	70	60	60	60	70	60	-	-	60	110	110	110	110	110	110	-	110	-	-	50	60	60	60
35	TINT	146	124	124	-	118	112	118	118	130	130	130	130	118	-	-	124	128	128	128	128	128	128	-	128	-	-	130	130	130	130
36	SHARP H1 MAX	511	511	511	-	511	511	511	511	511	511	511	511	511	-	-	511	511	511	511	511	511	511	-	511	-	-	511	511	511	511
37	SHARP H1 MIN	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
38	SHARP H2 MAX	511	511	511	-	511	511	511	511	511	511	511	511	511	-	-	511	511	511	511	511	511	511	-	511	-	-	511	511	511	511
39	SHARP H2 MIN	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
40	SHARP V1 MAX	511	511	511	-	511	511	511	511	511	511	511	511	511	-	-	511	511	511	511	511	511	511	-	511	-	-	511	511	511	511
41	SHARP V1 MIN	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
42	CONT CENTER	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
43	CONT MAX	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
44	CONT MIN	80	60	60	-	60	60	50	70	60	60	70	60	60	-	-	60	60	60	60	60	60	60	-	60	-	-	60	70	60	60
45	COLOR CENT	115	108	108	-	118	153	160	150	140	140	140	140	157	-	-	108	128	128	128	128	128	128	-	128	-	-	140	140	140	117
46	COLOR MAX	255	255	255	-	255	255	255	255	255	255	255	255	255	-	-	255	255	255	255	255	255	255	-	255	-	-	255	255	255	255
47	COLOR MIN	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0
48	H.POZI TEXT	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
49	VPOZI TEXT	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
50	CONT 40	*	*	*	-	*	*	*	*	*	*	*	*	*	-	-	*	*	*	*	*	*	*	-	*	-	-	*	*	*	*
51	INVERSION	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
52	BRIGHT (NTSC)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
	BRIGHT (PAL)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
	BRIGHT (SECAM)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
53	CONTRAST (NTSC)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
	CONTRAST (PAL)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X
	CONTRAST (SECAM)	X	X	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	-	X	-	-	X	X	X	X

NOTE: For the step no. with * mark, please adjust it according to the situation of the set. For the step no. with x mark, no use.

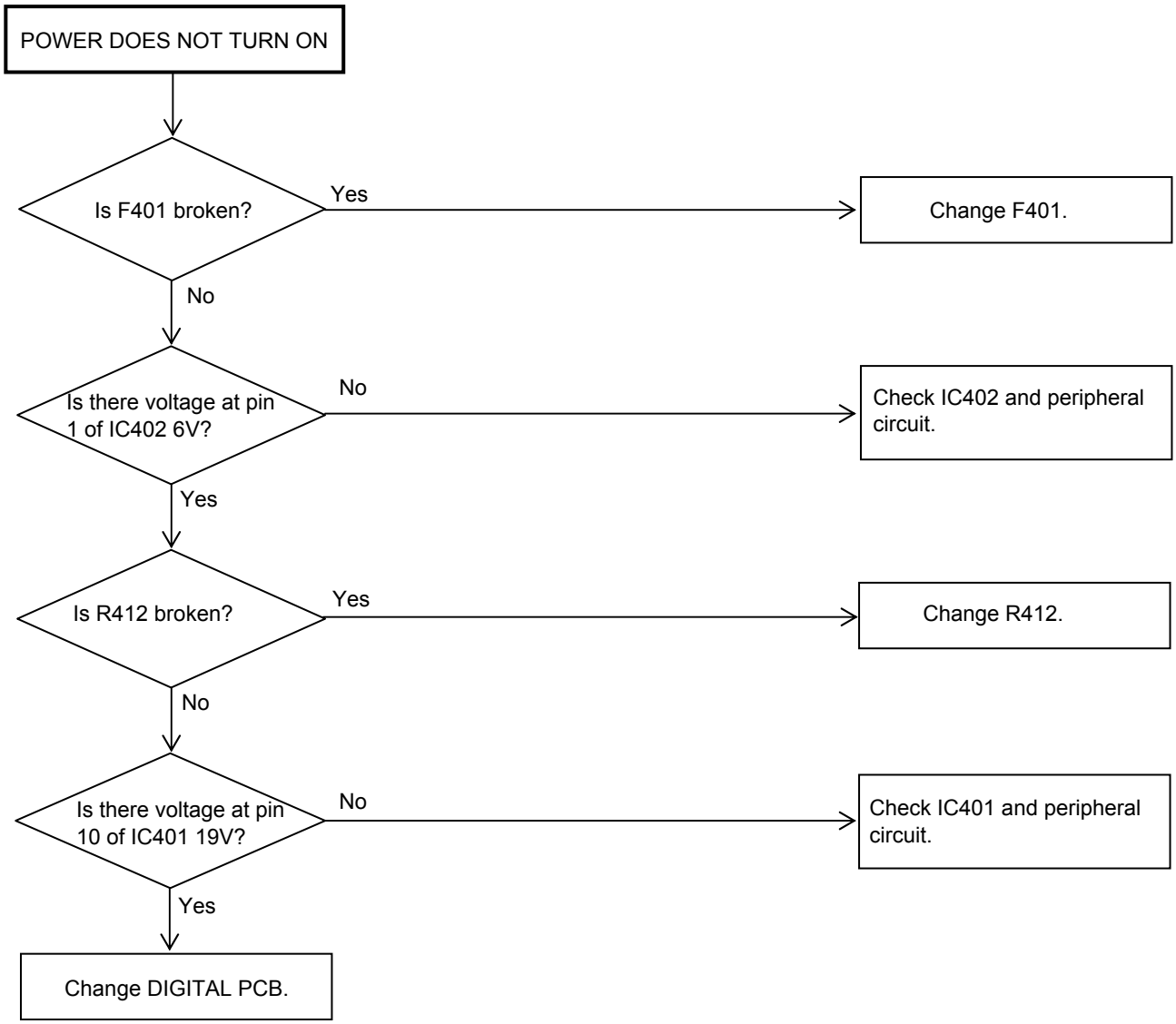
ELECTRICAL ADJUSTMENTS

3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

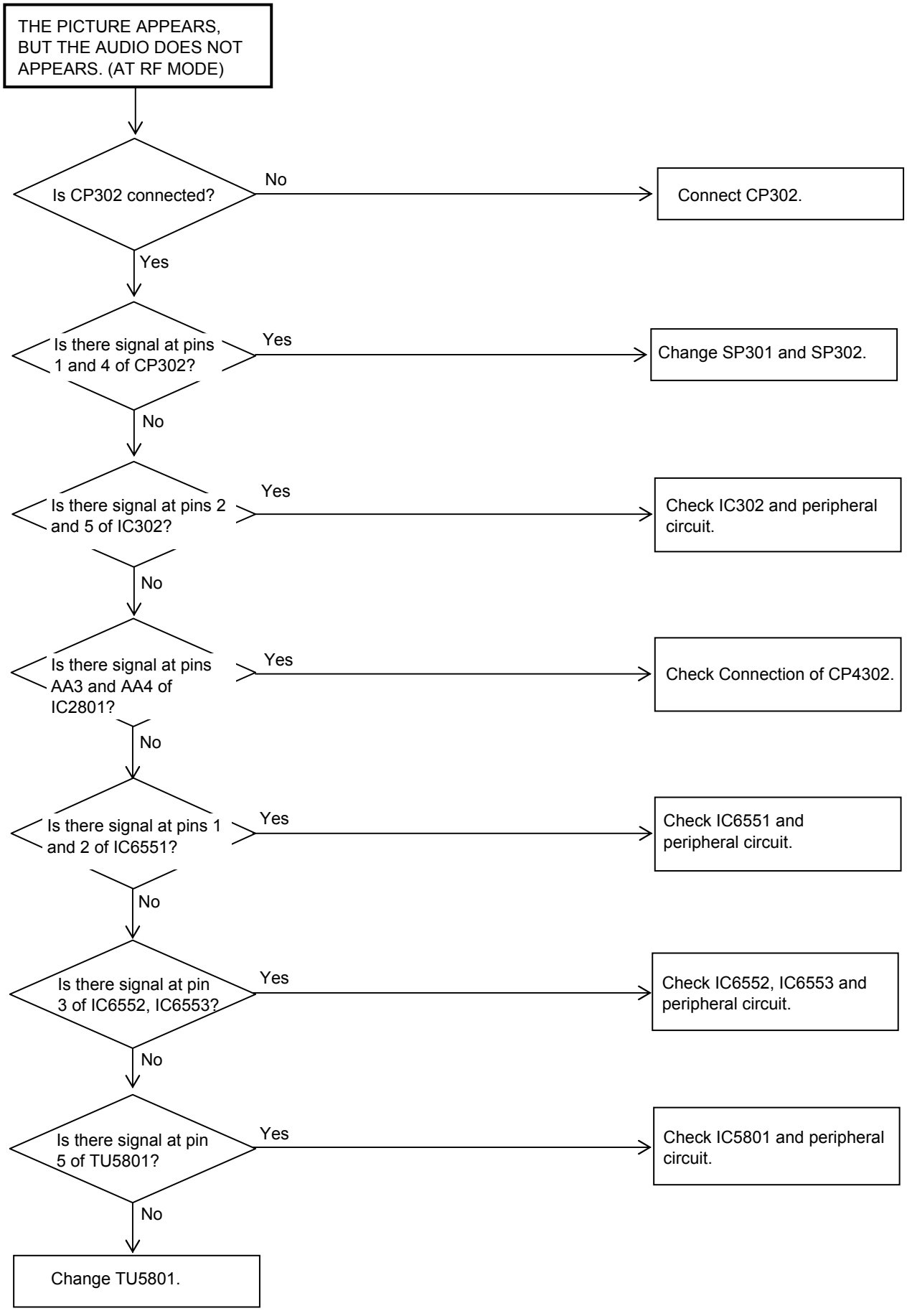


TROUBLESHOOTING GUIDE

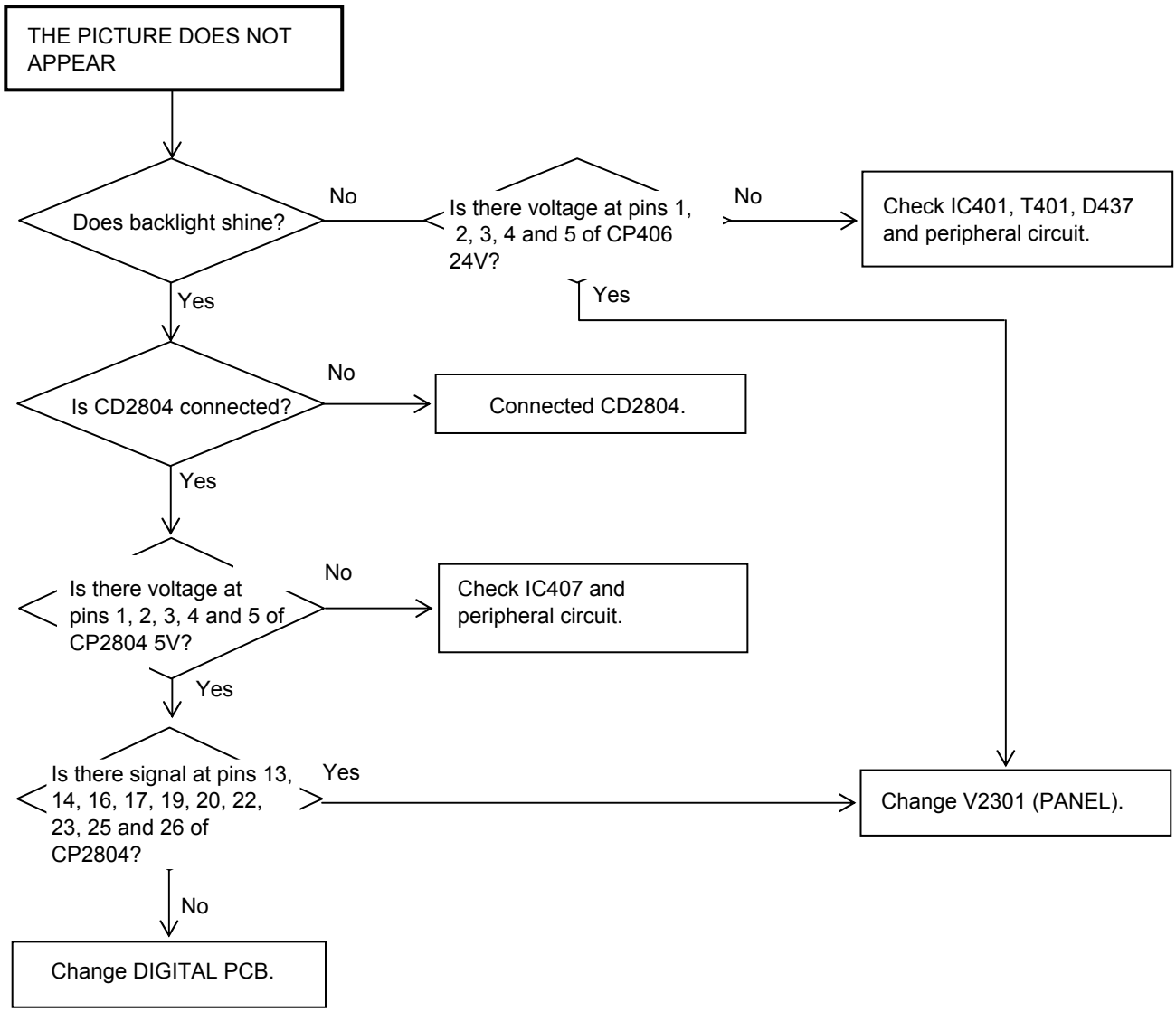
(LCD SECTION)



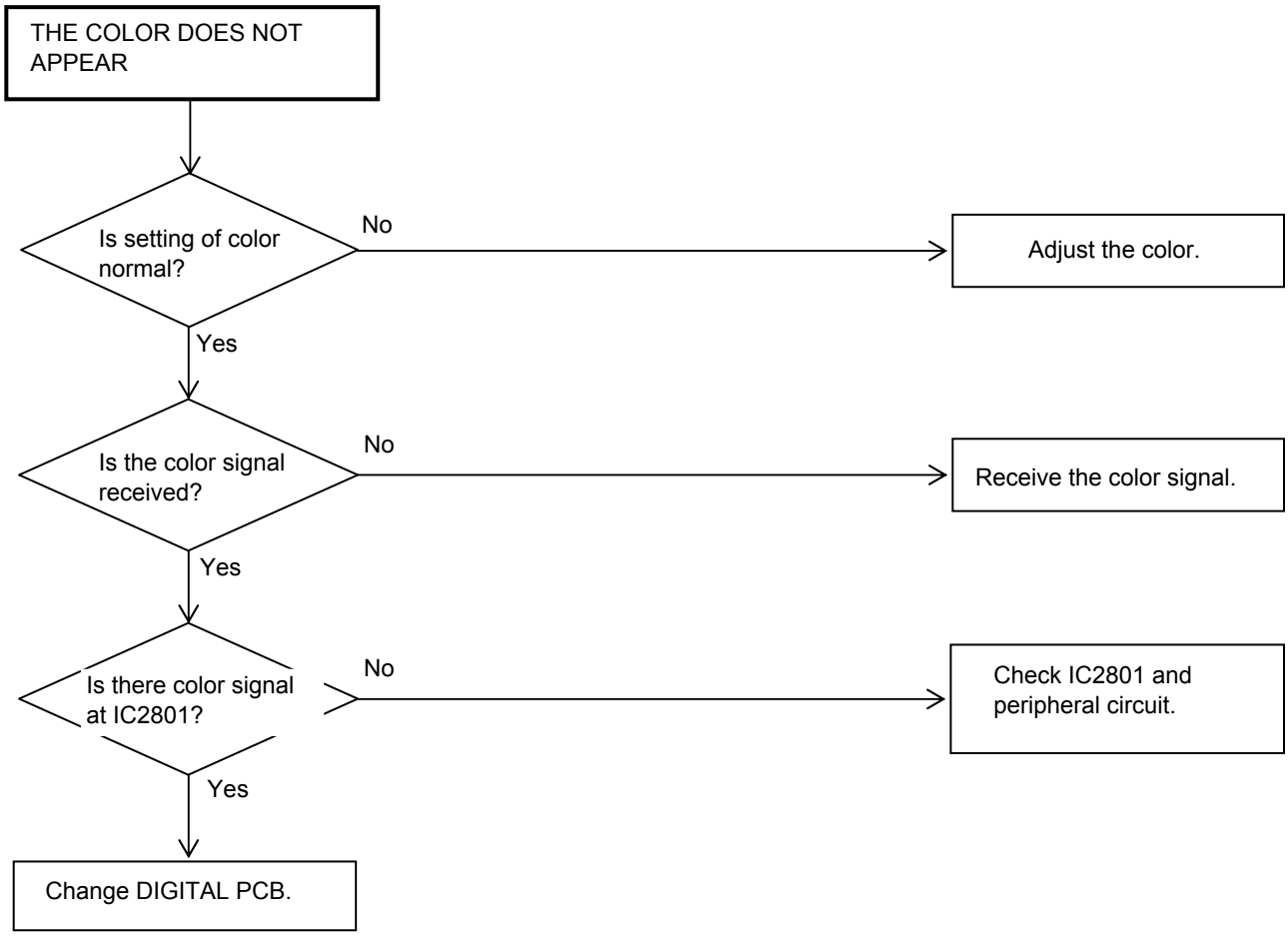
TROUBLESHOOTING GUIDE


THE PICTURE APPEARS, BUT THE AUDIO DOES NOT APPEARS. (AT RF MODE)
Is CP302 connected?
No
Connect CP302.
Yes
Is there signal at pins 1 and 4 of CP302?
Yes
Change SP301 and SP302.
No
Is there signal at pins 2 and 5 of IC302?
Yes
Check IC302 and peripheral circuit.
No
Is there signal at pins AA3 and AA4 of IC2801?
Yes
Check Connection of CP4302.
No
Is there signal at pins 1 and 2 of IC6551?
Yes
Check IC6551 and peripheral circuit.
No
Is there signal at pin 3 of IC6552, IC6553?
Yes
Check IC6552, IC6553 and peripheral circuit.
No
Is there signal at pin 5 of TU5801?
Yes
Check IC5801 and peripheral circuit.
No
Change TU5801.

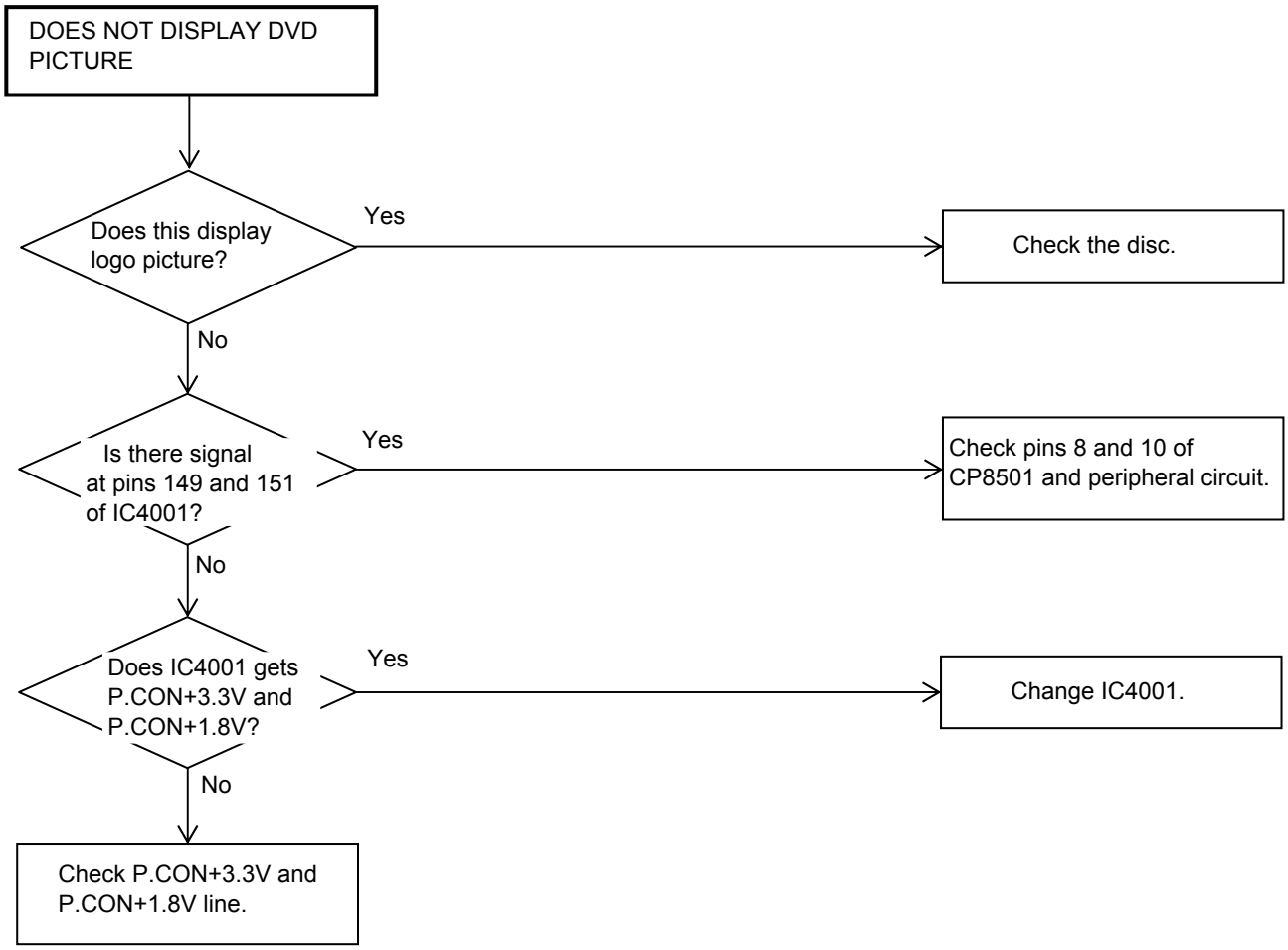
TROUBLESHOOTING GUIDE


THE PICTURE DOES NOT APPEAR
Does backlight shine?
No
Is there voltage at pins 1, 2, 3, 4 and 5 of CP406 24V?
No
Check IC401, T401, D437 and peripheral circuit.
Yes
Yes
Is CD2804 connected?
No
Connected CD2804.
Yes
Is there voltage at pins 1, 2, 3, 4 and 5 of CP2804 5V?
No
Check IC407 and peripheral circuit.
Yes
Is there signal at pins 13, 14, 16, 17, 19, 20, 22, 23, 25 and 26 of CP2804?
Yes
Change V2301 (PANEL).
No
Change DIGITAL PCB.

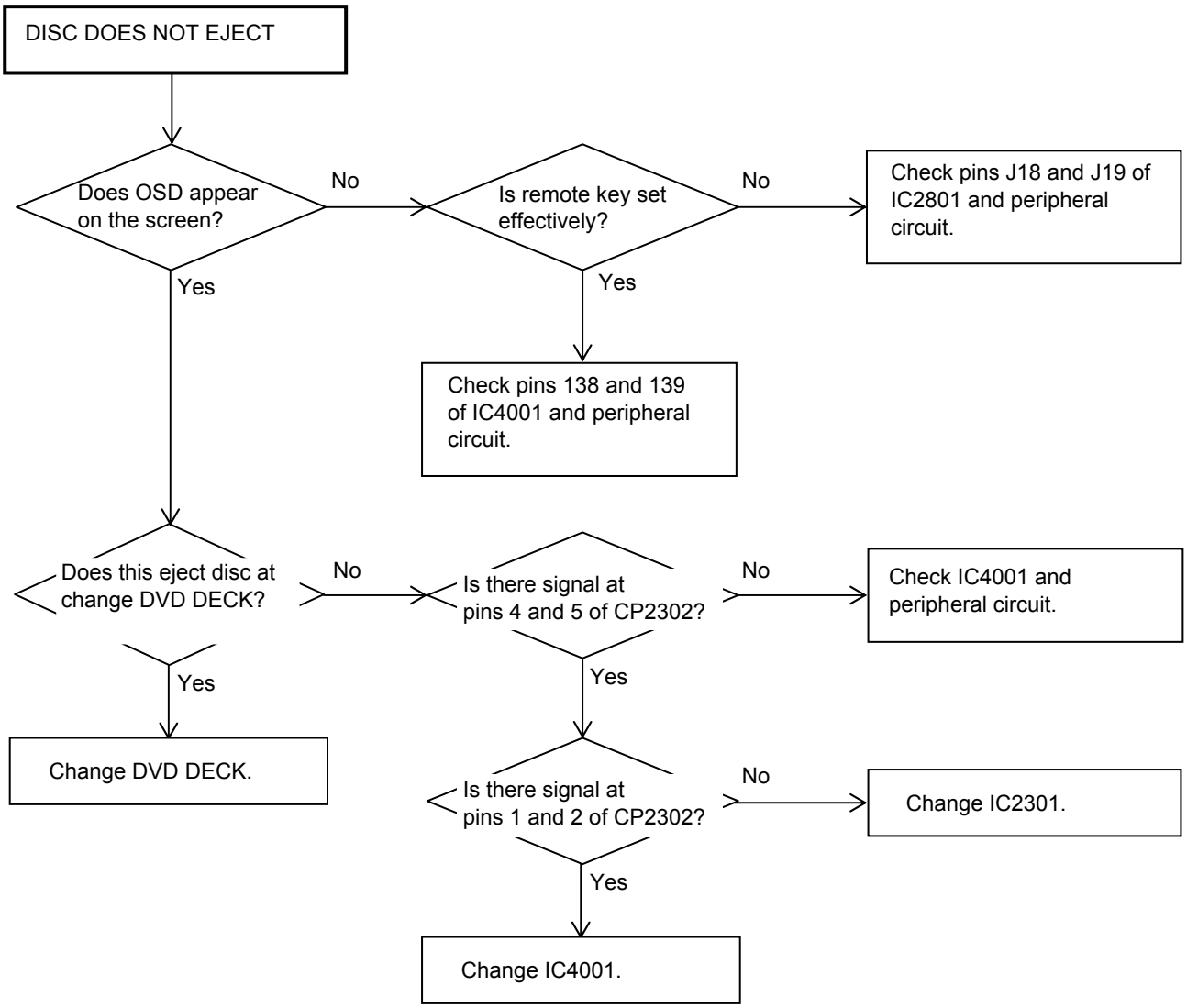
TROUBLESHOOTING GUIDE



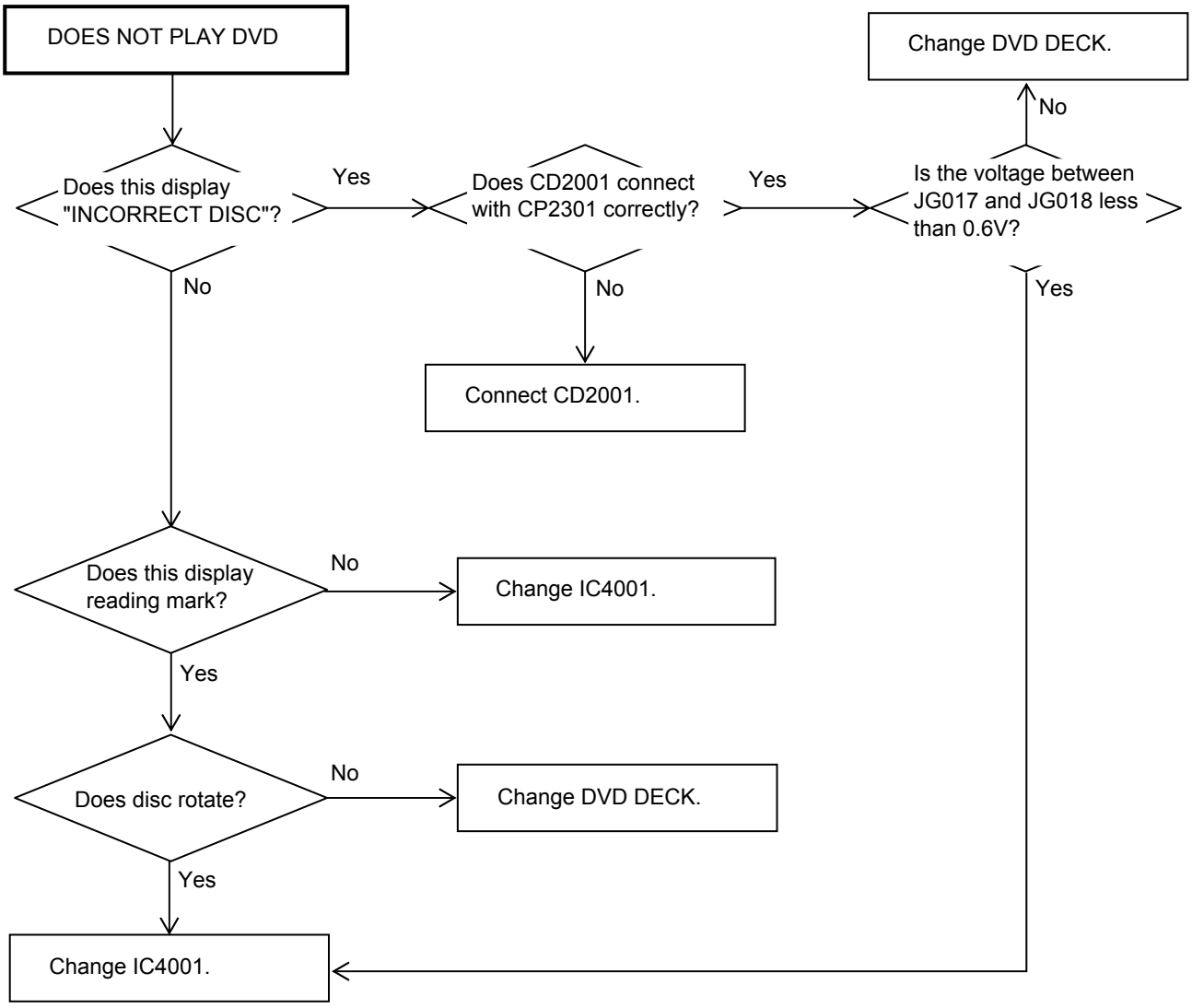
(DVD SECTION)


DOES NOT DISPLAY DVD PICTURE
Does this display logo picture?
Yes
Check the disc.
No
Is there signal at pins 149 and 151 of IC4001?
Yes
Check pins 8 and 10 of CP8501 and peripheral circuit.
No
Does IC4001 gets P.CON+3.3V and P.CON+1.8V?
Yes
Change IC4001.
No
Check P.CON+3.3V and P.CON+1.8V line.

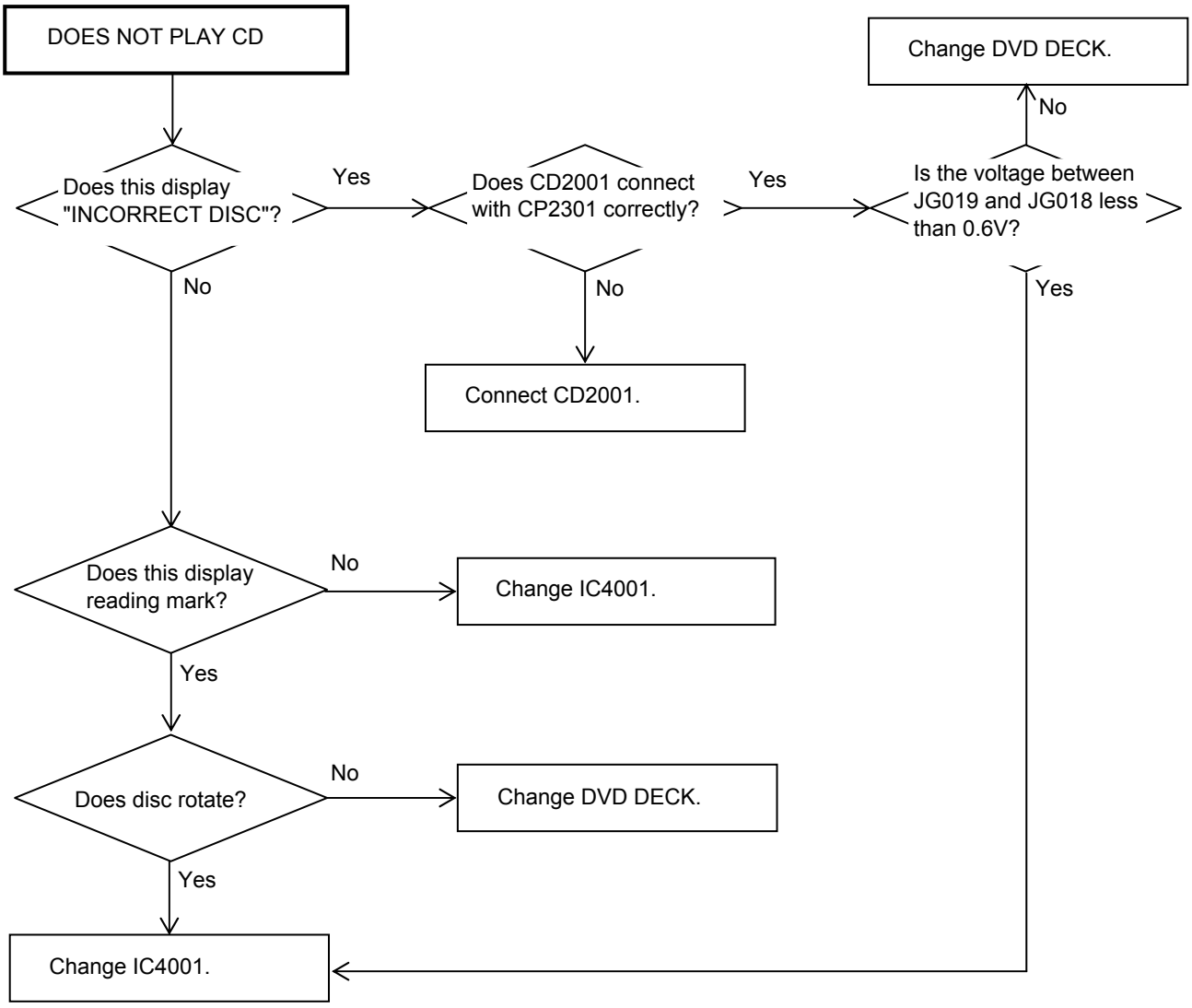
TROUBLESHOOTING GUIDE



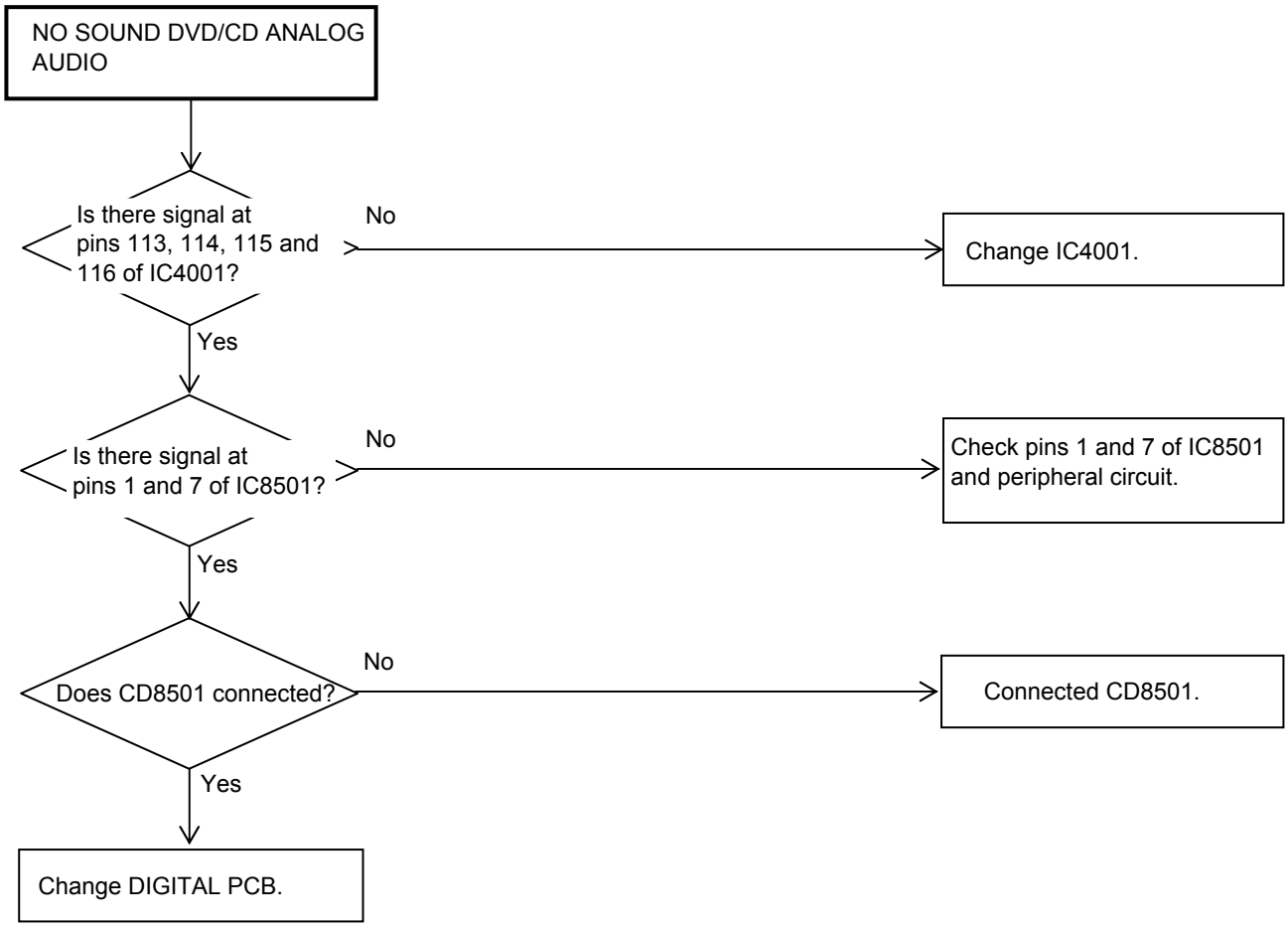
TROUBLESHOOTING GUIDE

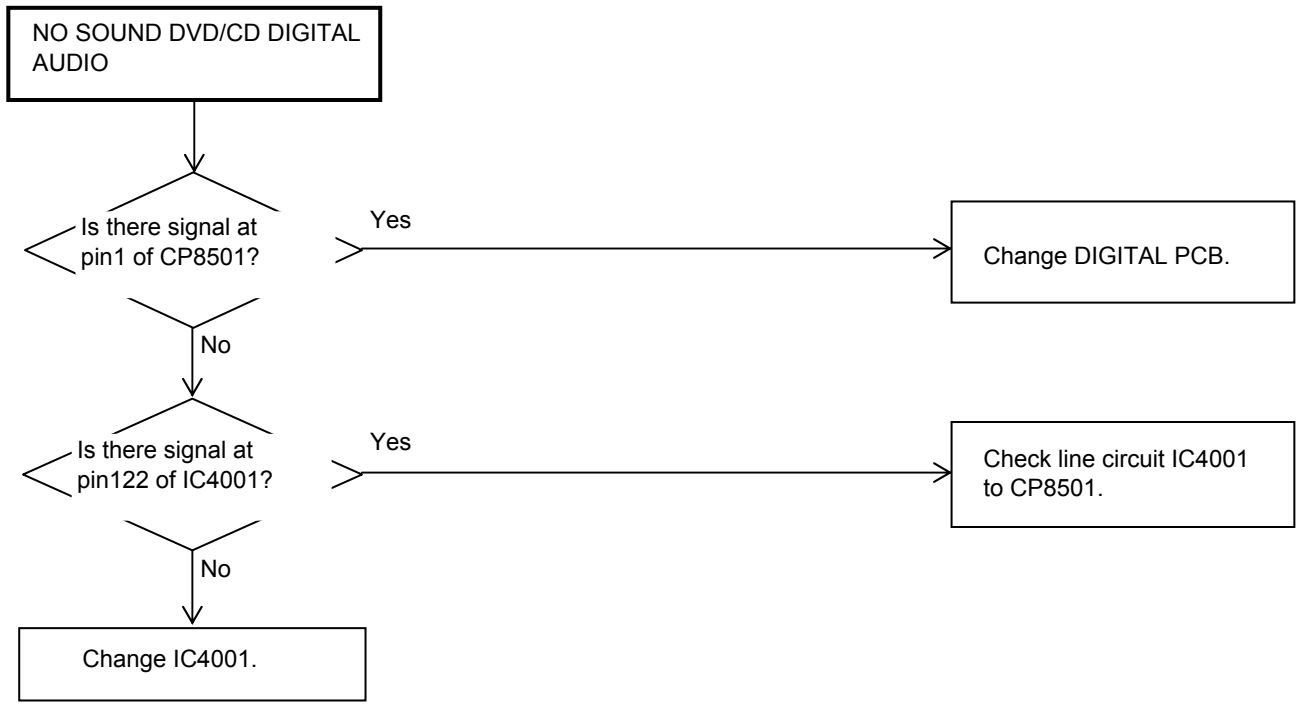


TROUBLESHOOTING GUIDE

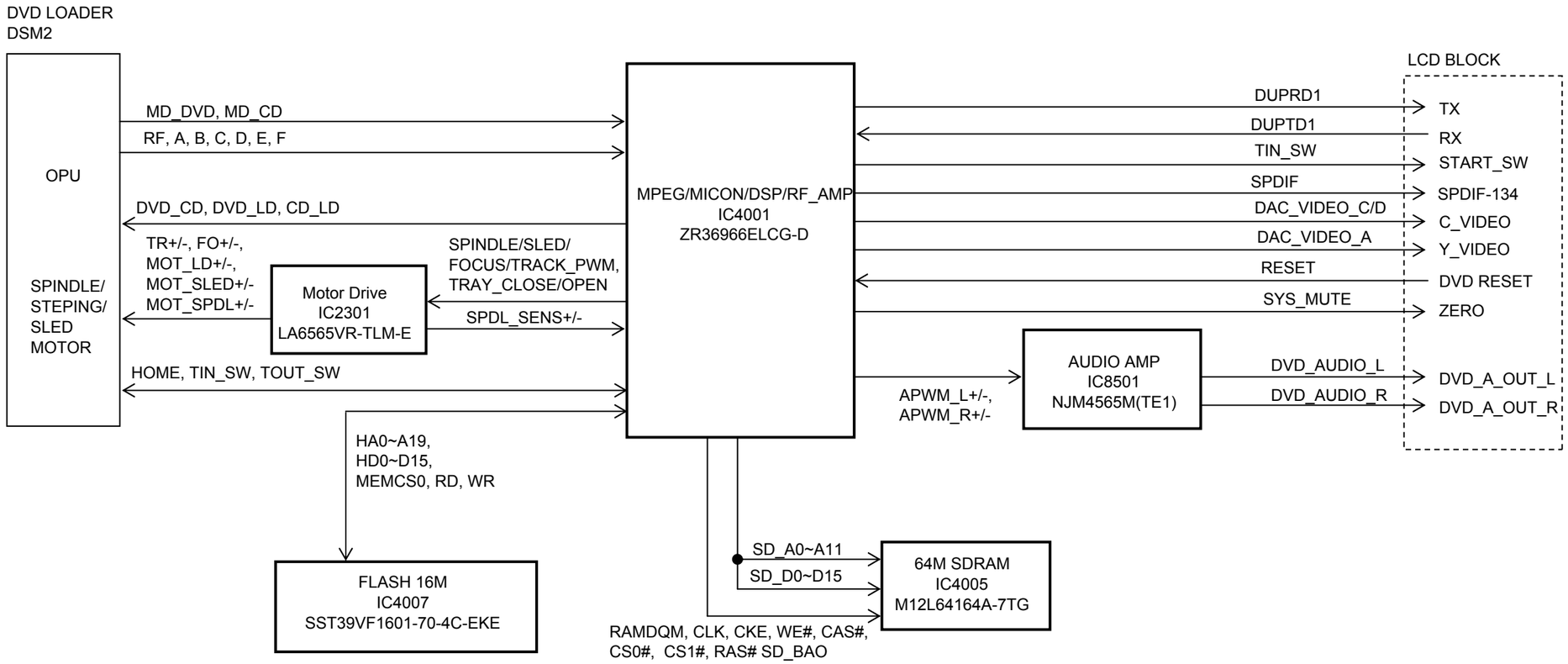


TROUBLESHOOTING GUIDE

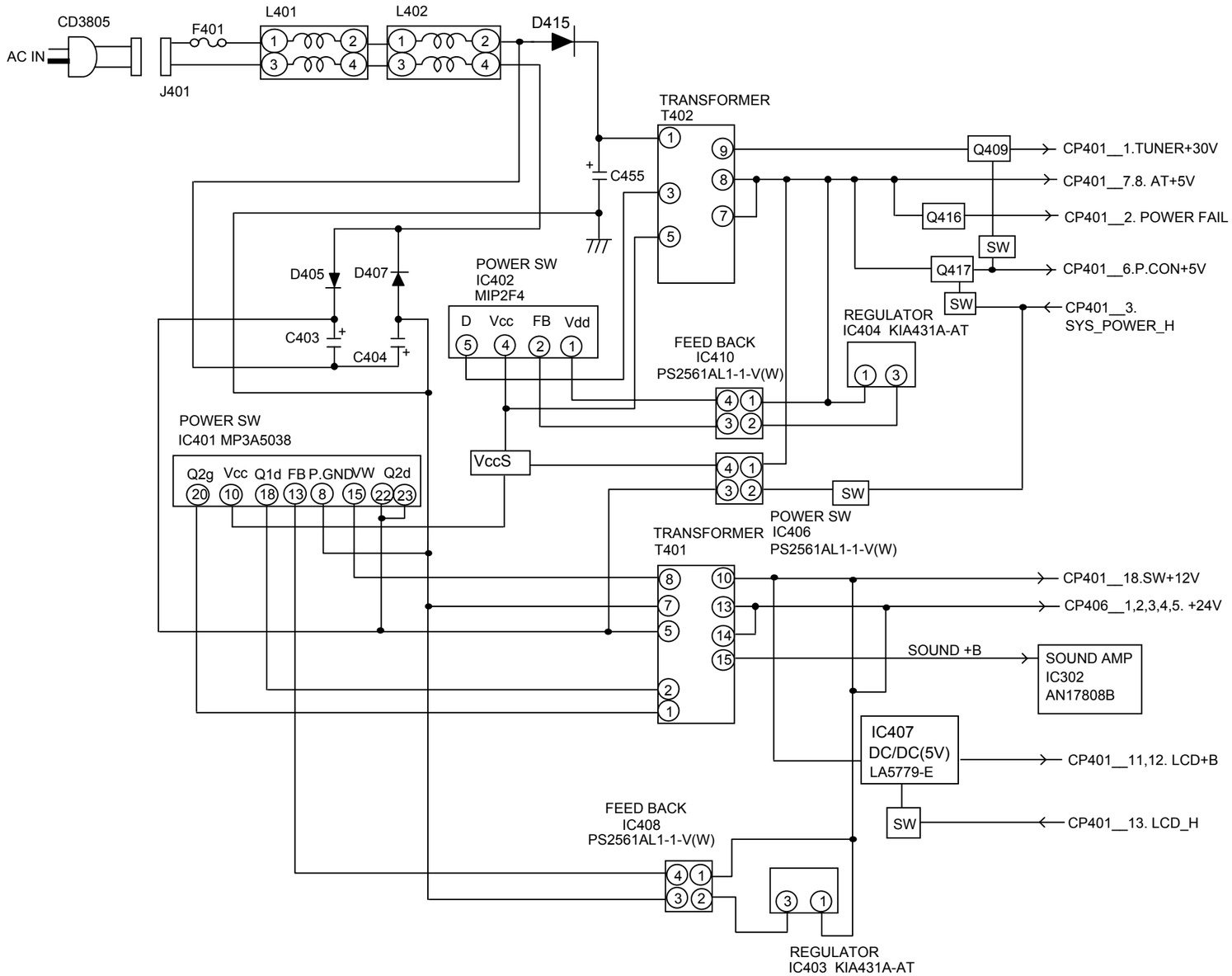




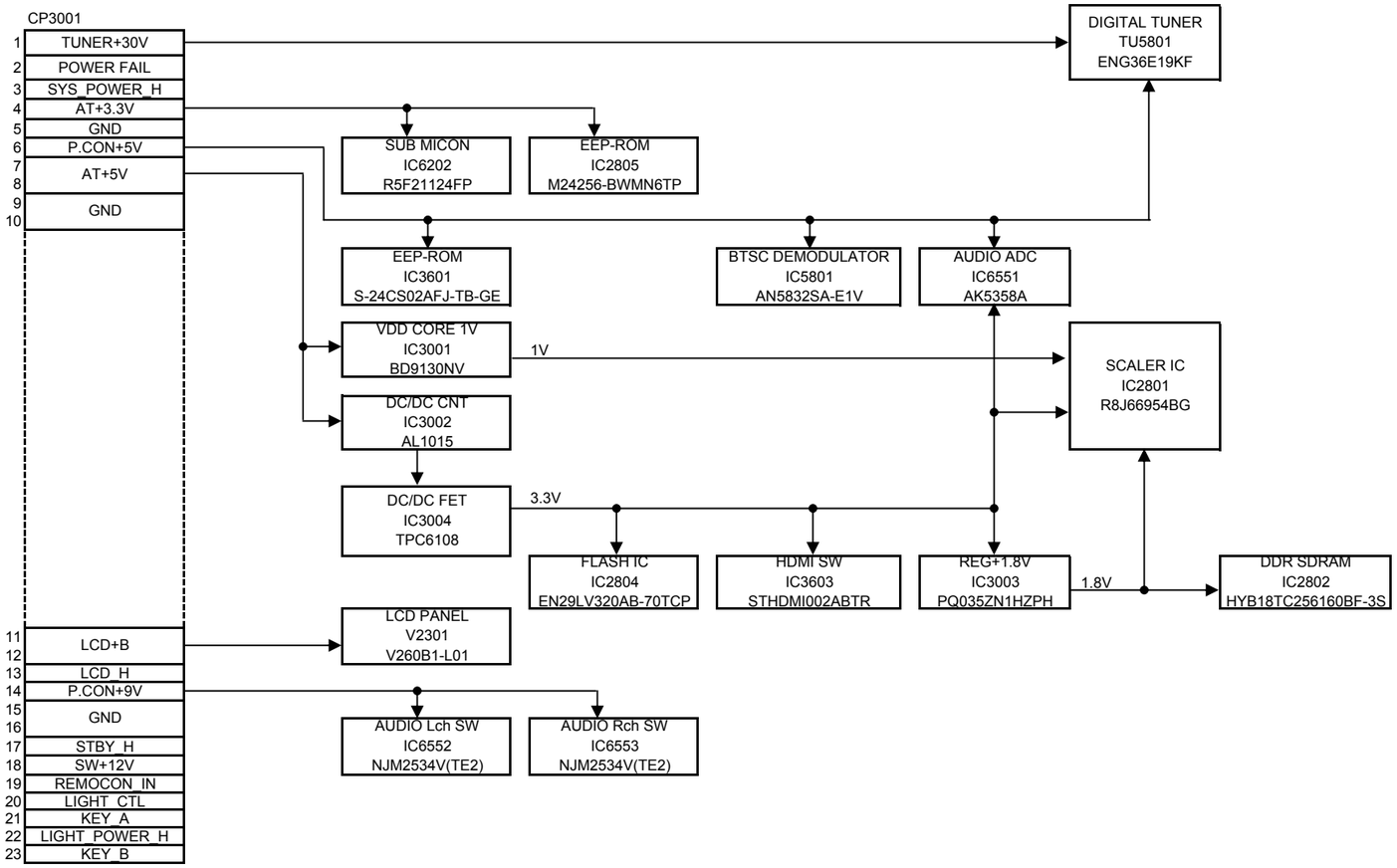
DVD BLOCK DIAGRAM



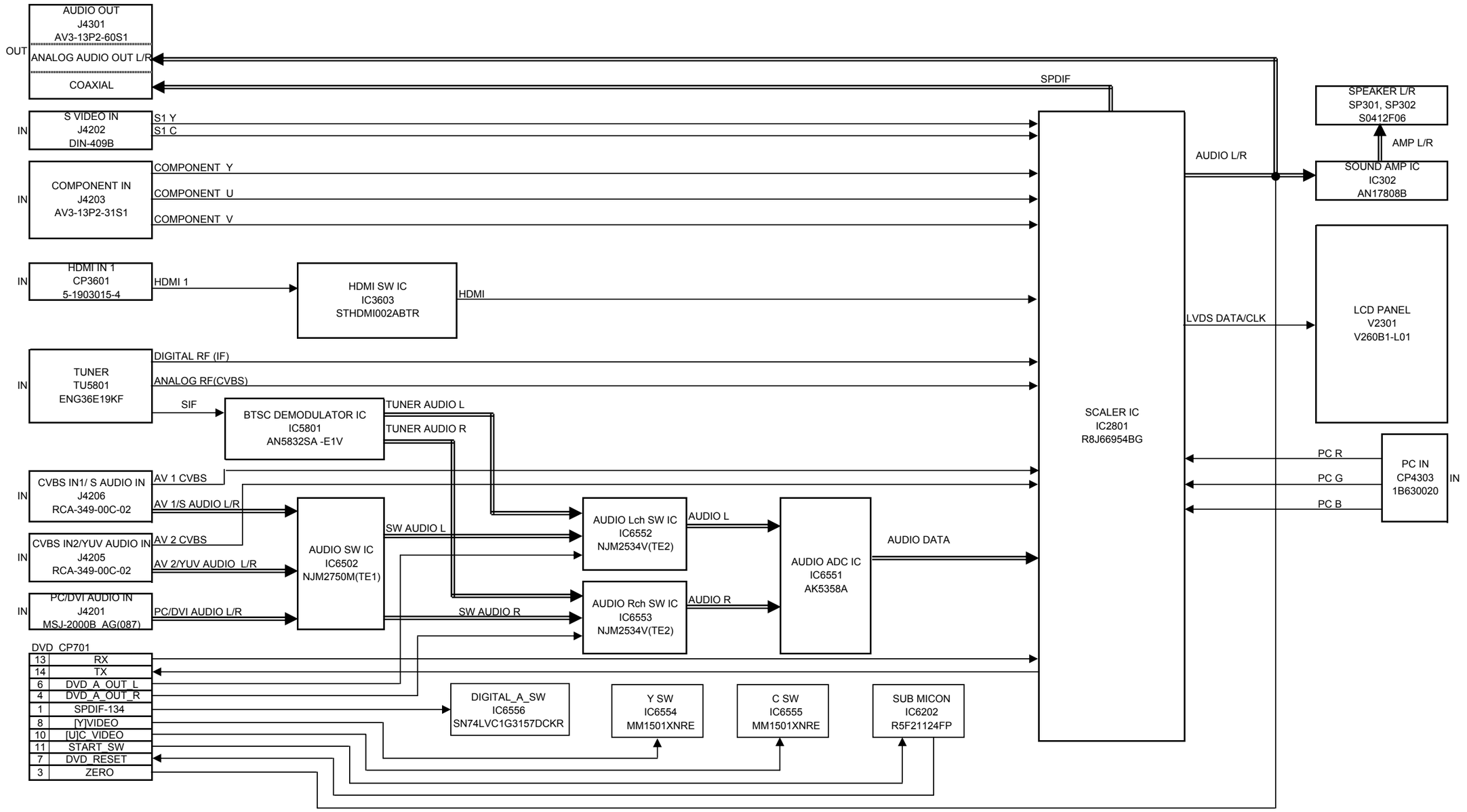
POWER BLOCK DIAGRAM



POWER(DIGITAL PCB) BLOCK DIAGRAM

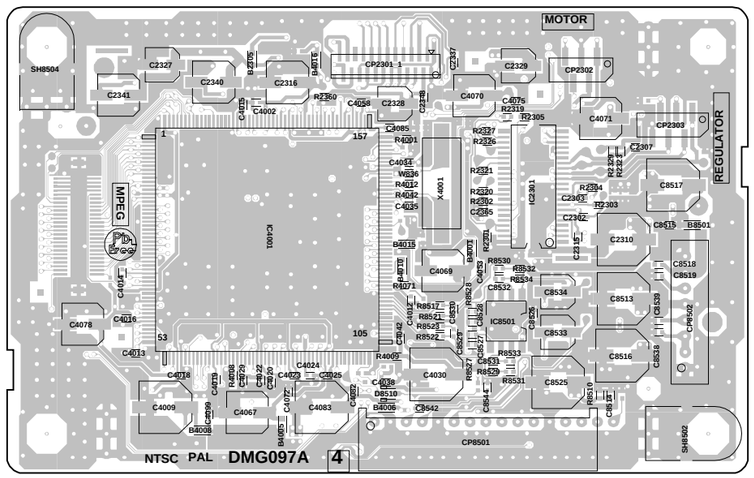


SIGNAL BLOCK DIAGRAM

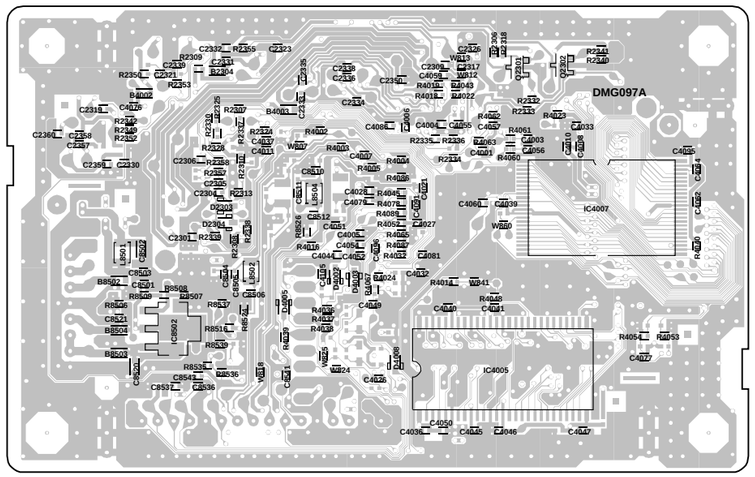


PRINTED CIRCUIT BOARDS

DVD MT (TOP SIDE)

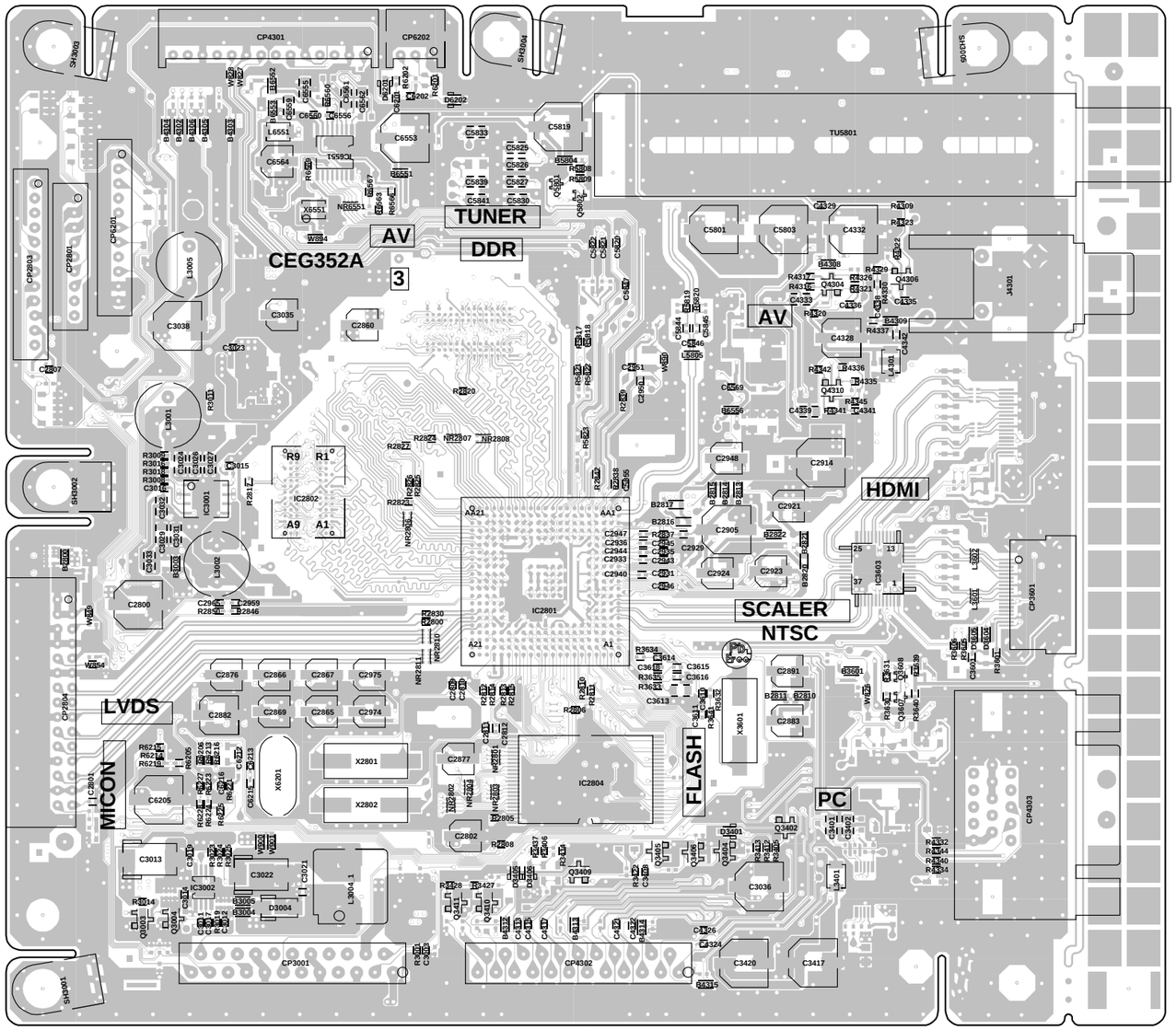


DVD MT (BOTTOM SIDE)



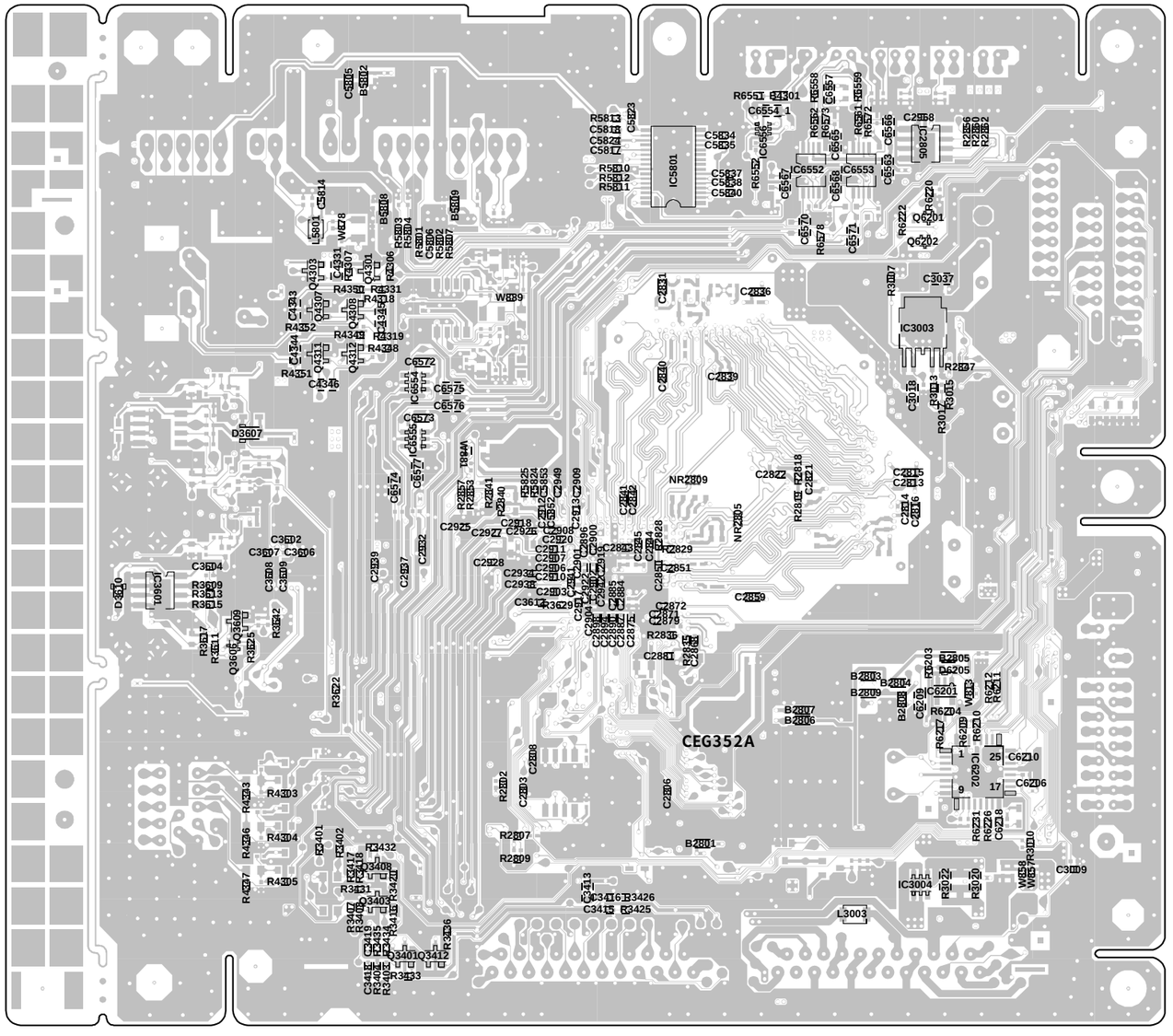
PRINTED CIRCUIT BOARDS

DIGITAL (TOP SIDE)



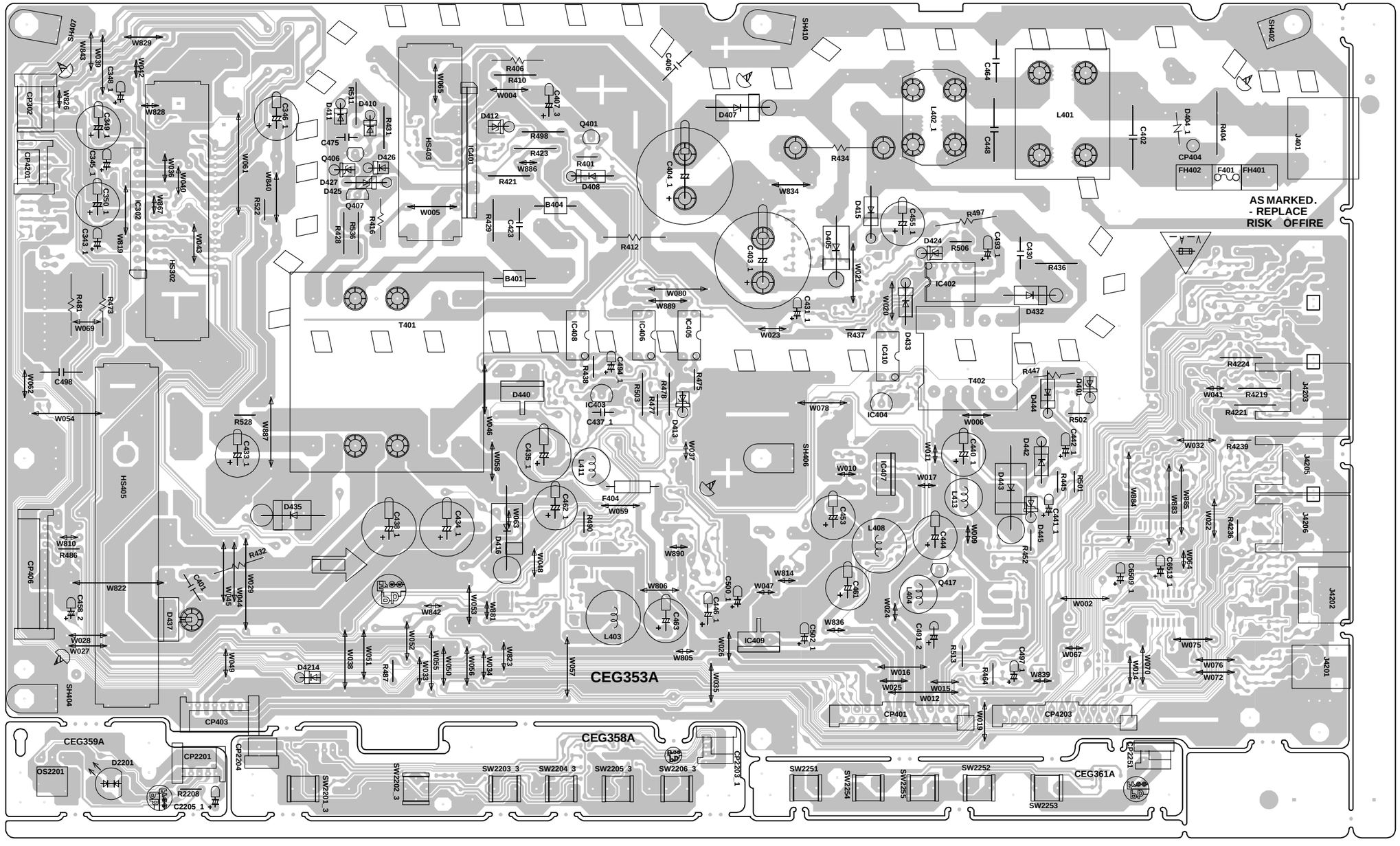
PRINTED CIRCUIT BOARDS

DIGITAL (BOTTOM SIDE)



PRINTED CIRCUIT BOARDS

POWER/OPERATION/OPERATION2/REMOCON (INSERTED PARTS)
SOLDER SIDE


CEG353A
CEG358A
CEG359A
CEG361A
AS MARKED.
- REPLACE
RISK OFFIRE
SH407
SH410
SH402
SH406
SH404
SH405
HS403
HS302
HS405
IC401
IC402
IC403
IC404
IC405
IC406
IC407
IC408
IC409
IC410
T401
T402
L401
L402_1
L403
L404
L408
L411
L413
F404
CP202
CP420
CP406
CP403
CP401
CP4203
CP2201
CP2204
CP2203_1
CP2251
CP404
FH402
F401
FH401
J401
J4203
J4205
J4206
J4202
J4201
SW2201_3
SW2202_3
SW2203_3
SW2204_3
SW2205_3
SW2206_3
SW2251
SW2254
SW2255
SW2252
SW2253
OS2201
D2201
R2208
C2205_1
D4214
C498
C401
C402
C403_1
C404_1
C406
C407_3
C437_1
C438_1
C439_1
C440_1
C441_1
C442_1
C443_1
C446_1
C448
C453
C455_1
C458_2
C461
C462_1
C463
C464
C483_1
C491_2
C494_1
C497_1
C500_1
C502_1
C513_1
C609_1
C343_1
C345_1
C346_1
C348_1
C349_1
C350_1
R511
R531
R536
R416
R428
R481
R473
R483
R528
R486
R432
R437
R438
R503
R478
R477
R475
R506
R497
R498
R423
R421
R429
R434
R436
R447
R502
R501
R445
R452
R464
R513
R4224
R4219
R4221
R4239
R4236
R404
R410
R406
R412
R490
D407
D408
D410
D411
D412
D413
D415
D416
D424
D425
D426
D427
D430
D432
D433
D435
D437
D440
D442
D443
D444
D445
Q401
Q406
Q407
Q417
B401
B404
W829
W843
W839
W826
W828
W819
W857
W835
W040
W061
W043
W069
W082
W054
W887
W810
W822
W028
W027
W049
W045
W044
W029
W048
W063
W065
W005
W004
W886
W834
W080
W889
W023
W078
W046
W058
W037
W059
W890
W806
W805
W842
W053
W881
W052
W055
W033
W050
W056
W034
W823
W038
W051
W057
W026
W035
W814
W047
W836
W024
W021
W020
W022
W006
W011
W010
W017
W009
W032
W041
W884
W883
W885
W054
W002
W067
W839
W075
W076
W072
W070
W014
W016
W025
W015
W012
W019
W031
W030
W042
W036
W907
W902
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W928
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W930
W931
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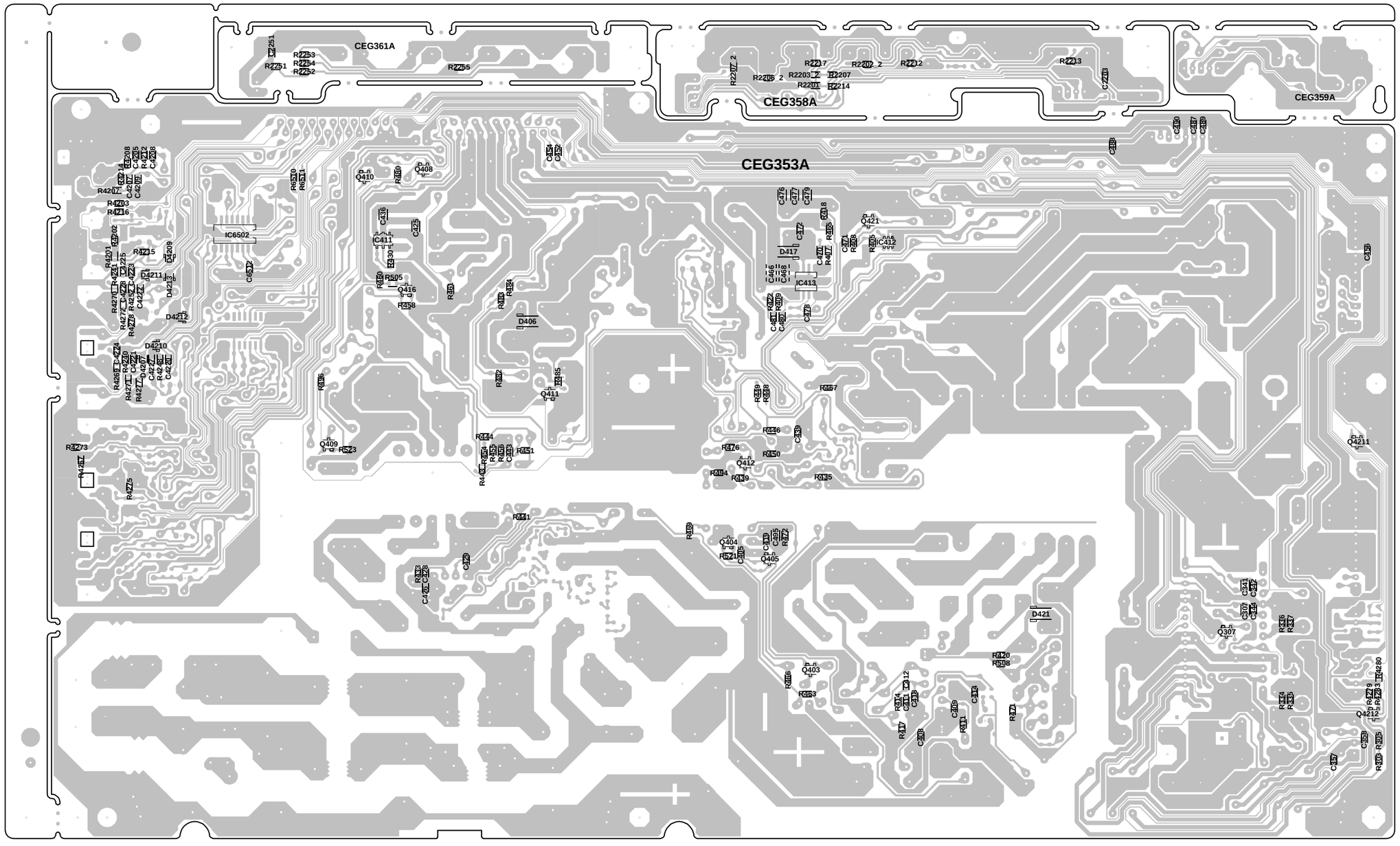
W933
W934
W935
W936
W937
W938
W939
W940
W941
W942
W943
W944
W945
W946
W947

PRINTED CIRCUIT BOARDS
POWER/OPERATION/OPERATION2 (CHIP MOUNTED PARTS)
SOLDER SIDE



MPEG/MICON/DSP/RF_AMP SCHEMATIC DIAGRAM

(DVD MT PCB)

MPEG/MICON/DSP/RF_AMP IC
IC4001
ZR36966ELCG-D

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

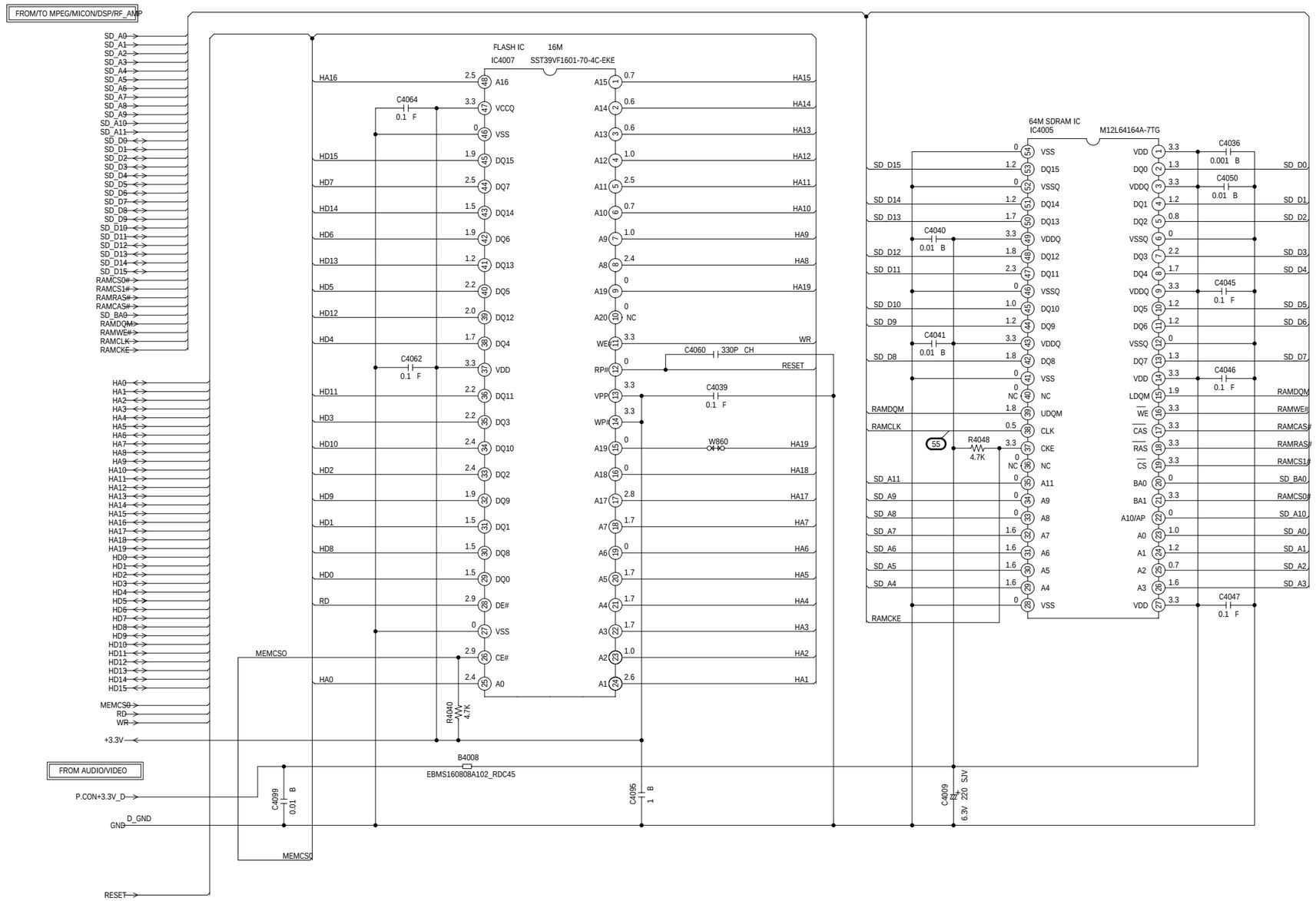
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMG097

H-1

H-2

MEMORY SCHEMATIC DIAGRAM
(DVD MT PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

MOTOR DRIVE SCHEMATIC DIAGRAM

(DVD MT PCB)

DSM2(06SD)

FROM/TO LOADER

CP2301_1
LD07T2-24ND-03

1	GND
2	F
3	Vref
4	VCC
5	E
6	D
7	C
8	SW1(DVD/CD)
9	VRF(RF_OUT)
10	B
11	A
12	VR(DVD)
13	VR COM
14	VR(CD)
15	GND
16	LD(CD)
17	PD/GND
18	LD(DVD)
19	GND
20	NC
21	T DRV
22	T RTN
23	F DRV
24	F RTN

CP2302
04_6232_105_015_800+

5	CLOSE
4	OPEN
3	GND(D)
2	LD-
1	LD+

CP2303
04_6232_106_015_800+

6	SW(GND)
5	LIMIT SW
4	SLD-
3	SLD+
2	SP1-
1	SP1+

FROM/TO MPEG/MICON/DSP/RF_AMP

MD_DVD
MD_CD
DVD_CD
DVD_LD
CD_LD
RF
GND
OPU_A
OPU_B
OPU_C
OPU_D
OPU_E
OPU_F
VC
HOME
TOUT_SW
TIN_SW
FOCUS_PWM
TRACK_PWM
VDDPWM3.3V
DRVSB
SPINDLE_PWM
TRAY_CLOSE
TRAY_OPEN
SPDL_SENS+
SPDL_SENS-
SLED_PWM

FROM AUDIO/VIDEO

P.CON+A5V_D
P.CON+3.3V_D
P.CON+6V_D
(D_GND)
GND

B2304
EBMS160808A102_RDC45

B2305
EBMS160808A102_RDC45

MOTOR DRIVE IC
IC2301
LA6565VR-TLM-E

S-GND	VCONT	MUTE1	MUTE234	VIN4-	NC	VIN4+	VREF-IN	VREF-OUT	REG-OUT	NC	REG-IN	VIN-OP	VIN+OP	VO_OP	VIN3	VIN3-	NC	VIN2	VIN2-	VIN2+	NC
44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
0	4.1	3.2	3.2	1.6	0 NC	1.6	1.6	0 NC	1.6	0 NC	0 NC	0	0	0 NC	1.6	1.6	0 NC	1.8	1.6	1.6	0 NC

FWD	REV	VCC2	NC	VLD-	VLD+	VD4+	VD4-	VD3+	VD3-	PGND2	PGND1	VD2+	VD2-	VD1-	VD1+	NC	VCC1	VCCS	VIN1+A	VIN1-A	VIN 1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
0	0	6.0	0 NC	1.9	1.9	2.6	2.7	2.6	2.8	0	0	3.7	1.7	2.6	2.7	0 NC	6.0	6.0	1.6	1.6	1.6

DVD LD CTL
Q2301
KTA1505S-Y-RTK/P

CD LD CTL
Q2302
KTA1544T-RTK/P

W812
W813

TP2305
TP2303
TP2304
TP2306
TP2307
TP2308
TP2309
TP2310
TP2311
TP2312
TP2317
TP2318
TP2319
TP2320
TP2322
TP2313
TP2314
TP2315
TP2316
TP2301
TP2302

JG017
JG018
JG019
JG026
JG034
JG035
JG036
JG037
JG056
JG057
JG058

(RF_GND)
(D_GND)
RF_A5V
M_GND
VC2
DVDLD
CDLD
TRACK_PWM
FOCUS_PWM
MD_DVD (VR_CD)
MD_CD (VR_DVD)
DVD_LD
CD_LD
VC
DVD_CD
TIN_SW
TOUT_SW
MOT_LD-
MOT_LD+
P.CON+3.3V_D
MOT_SLED-
MOT_SLED+
MOT_SPDL-
MOT_SPDL+
TRAY_OPEN
TRAY_CLOSE
TR+
TR-
FO+
FO-
HOME

PCB130
DMG097

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

AUDIO/VIDEO SCHEMATIC DIAGRAM

(DVD MT PCB)

FROM/TO MPEG/MICON/DSP/RF_AMP

DAC_VIDEO_C/D
DAC_VIDEO_A
RESET
SYS_MUTE
DUPRD1
SPDIF
DUPTD1
APWM_L+
APWM_L-
APWM_R+
APWM_R-
P.CON+1.8V_D
P.CON+3.3V_D
P.CON+5V_D
GND
TIN_SW

TO MEMORY

RESET
P.CON+3.3V_D
GND

TO MOTOR DRIVE

P.CON+A5V_D
P.CON+3.3V_D
P.CON+6V_D
GND
M_GND

DAC_VIDEO_C/D → C8505 12P CH → L8502 1uHNLV25 → C8504 150P CH / C8506 150P CH → 59 → DAC_C[U]C_VIDEO

DAC_VIDEO_A → C8511 12P CH → L8504 1uHNLV25 → C8510 150P CH / C8512 150P CH → 58 → DAC_A[Y]_VIDEO

APWM_L- → R8517 47K → R8530 2.2K → C8532 47P CH → R8534 15K
R8532 47K
C8530 0.0012 B
APWM_L+ → R8521 47K
R8506 220 → C8513 16V 47 SJV

AUDIO_AMP IC IC8501 NJM4565M(TE1)
A_GND 0 / 4.3 / 4.3 / 6.9
VCC 4.3 / 4.3 / 6.9 / 10.9
R8510 24K
C8525 16V 47 SJV
C8514 0.1 B
R8528 47K
C8528 150P CH
R8516 10K
R8527 47K
C8527 150P CH
C8526 0.1 B

APWM_R+ → R8522 47K
C8533 16V 10 SJV → R8536 1K → 57
C8529 0.0012 B
APWM_R- → R8523 47K → R8529 2.2K → C8531 47P CH → R8533 15K
R8531 47K

C8534 16V 10 SJV → R8539 1K → 56
R8537 10K
R8535 10K

P.CON+6V_D → C8515 0.1 B / C8517 16V100 SJV → B8501 HCB1608KF-121T20 → C8518 0.001 B
M_GND
P.CON+5V_D
P.CON+A5V_D → L8501 2.2uHNLV25 → B8502 EBMS160808A102_RDC45 → C8521 0.1 B / C8519 0.001 B
C8502 1 F / C8503 0.1 B
B8504 EBMS160808A102_RDC45 → C8539 0.001 B
SH8502 YQ-12
SH8504 YQ-12

P.CON+3.3V_D → B8503 HCB1608KF-121T20
1.8V REG IC
IC8502 LM1117S-ADJ
ADJ 1 / OUT 2 / IN 3
C8520 2.2 B
C8538 0.001 B

P.CON+1.8V_D → C8501 1 F / R8507 1K ±5% / R8508 2.2K ±1% / R8509 68 ±1% / C8516 6.3V 100 SJV

FROM/TO REGULATOR

CP8502 (CP403)
A2001WV2-8P

GND(M)	8
P.CON+6V	7
P.CON+A5V	6
GND	5
P.CON+12V	4
P.CON+3.3V	3
P.CON+3.3V	2
GND	1

CD8502
CU282701

TIN_SW
DUPTD1 → W825
DUPRD1 → W824
RESET
SYS_MUTE → D8510 MA111
SPDIF

FROM/TO JACK3

CP8501 (CP4301)
A2001WR-14A

SSCRXD/TX	14
SSCTXD/RX	13
GND	12
START_SW	11
[U]C_VIDEO	10
[V]Y_VIDEO	9
[Y]_VIDEO	8
DVD RESET	7
DVD_A_OUT_L	6
GND	5
DVD_A_OUT_R	4
ZERO	3
GND	2
SPDIF-134	1

W818
CD8501
CU2E2701

C8542 0.01 B
C8537 560P CH
C8536 560P CH
C8543 0.01 B
C8541 0.01 B
C8544 0.01 B

PCB130
DMG097

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

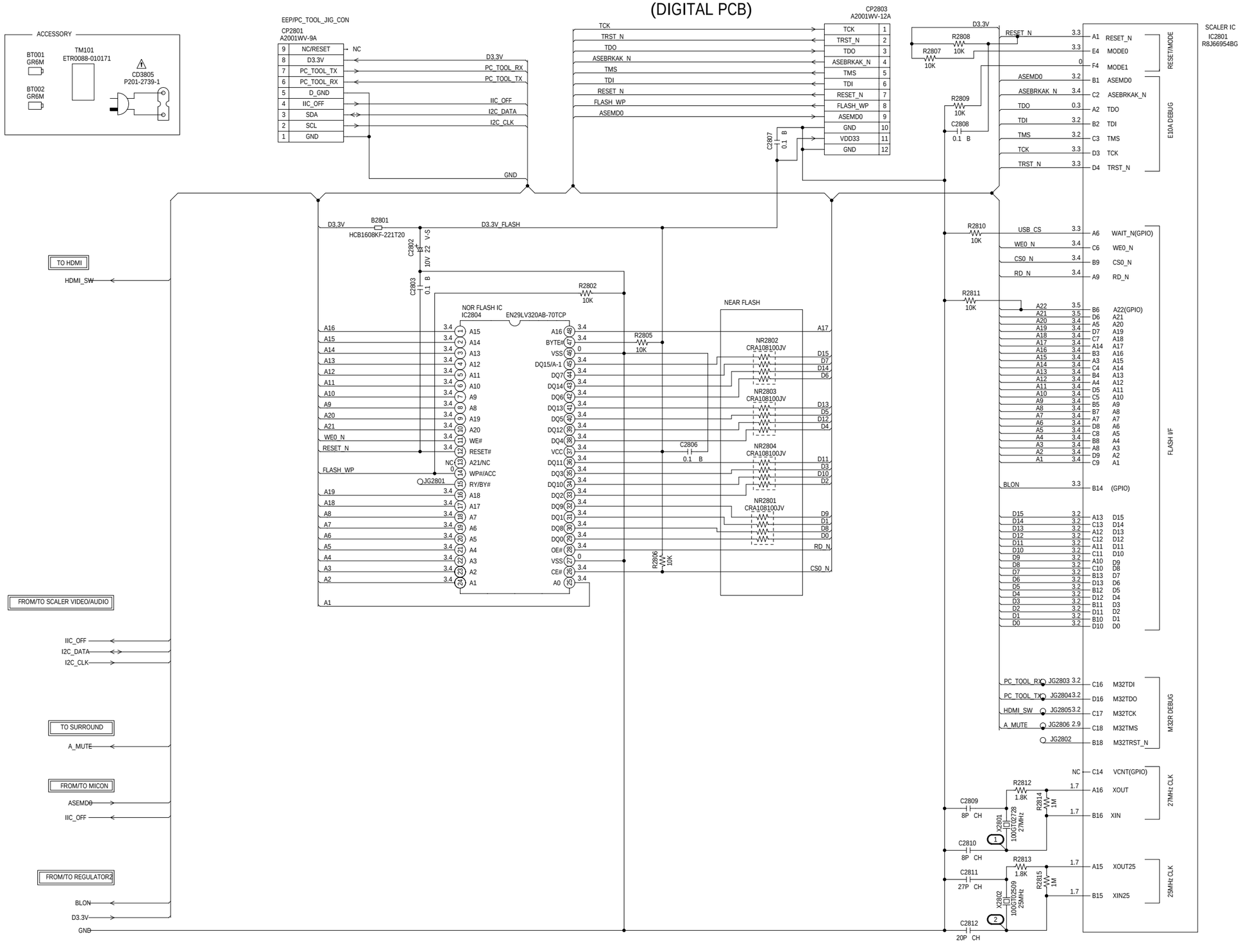
ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

FLASH SCHEMATIC DIAGRAM

(DIGITAL PCB)

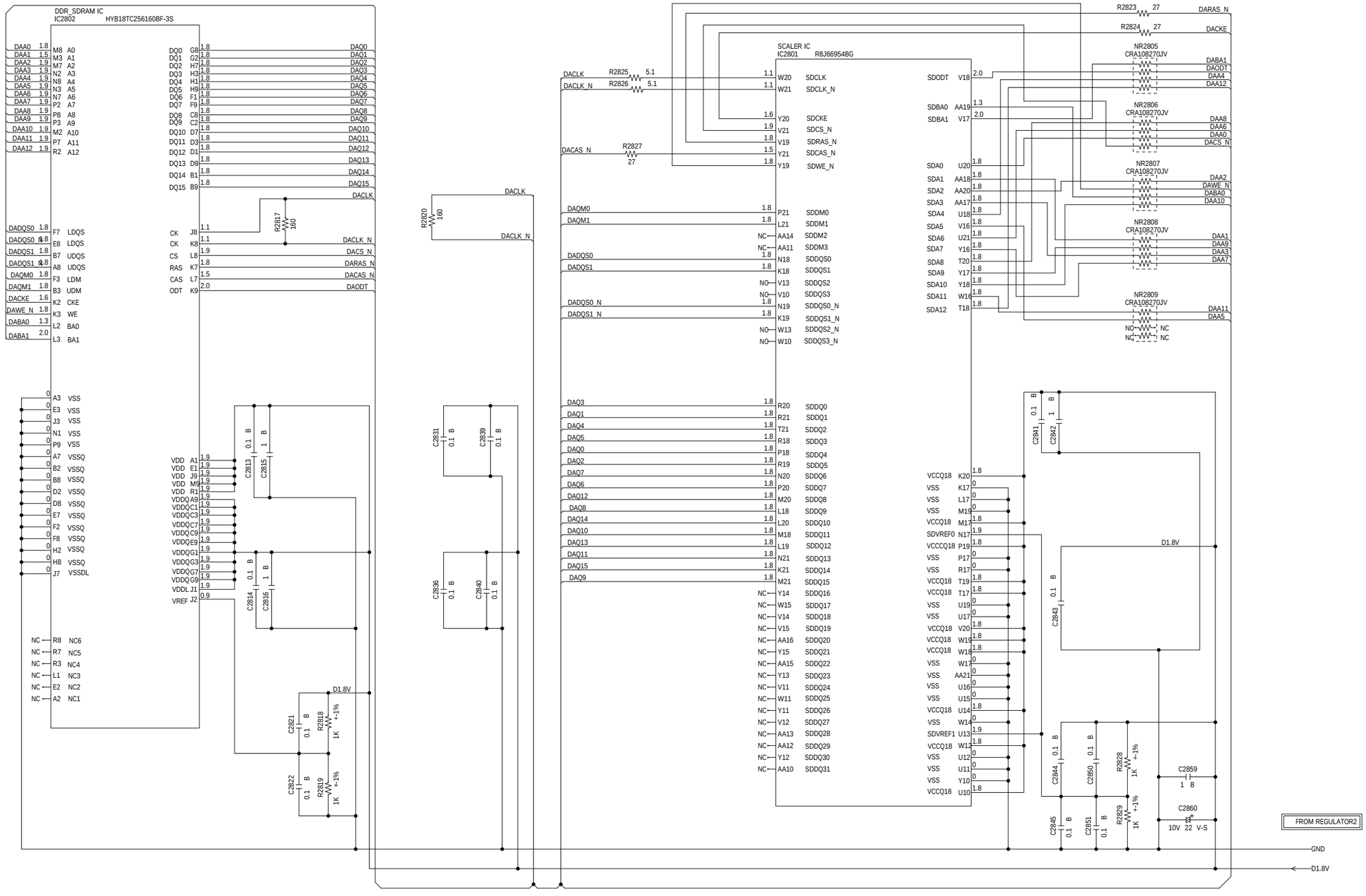


NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

DDR2 SCHEMATIC DIAGRAM

(DIGITAL PCB)



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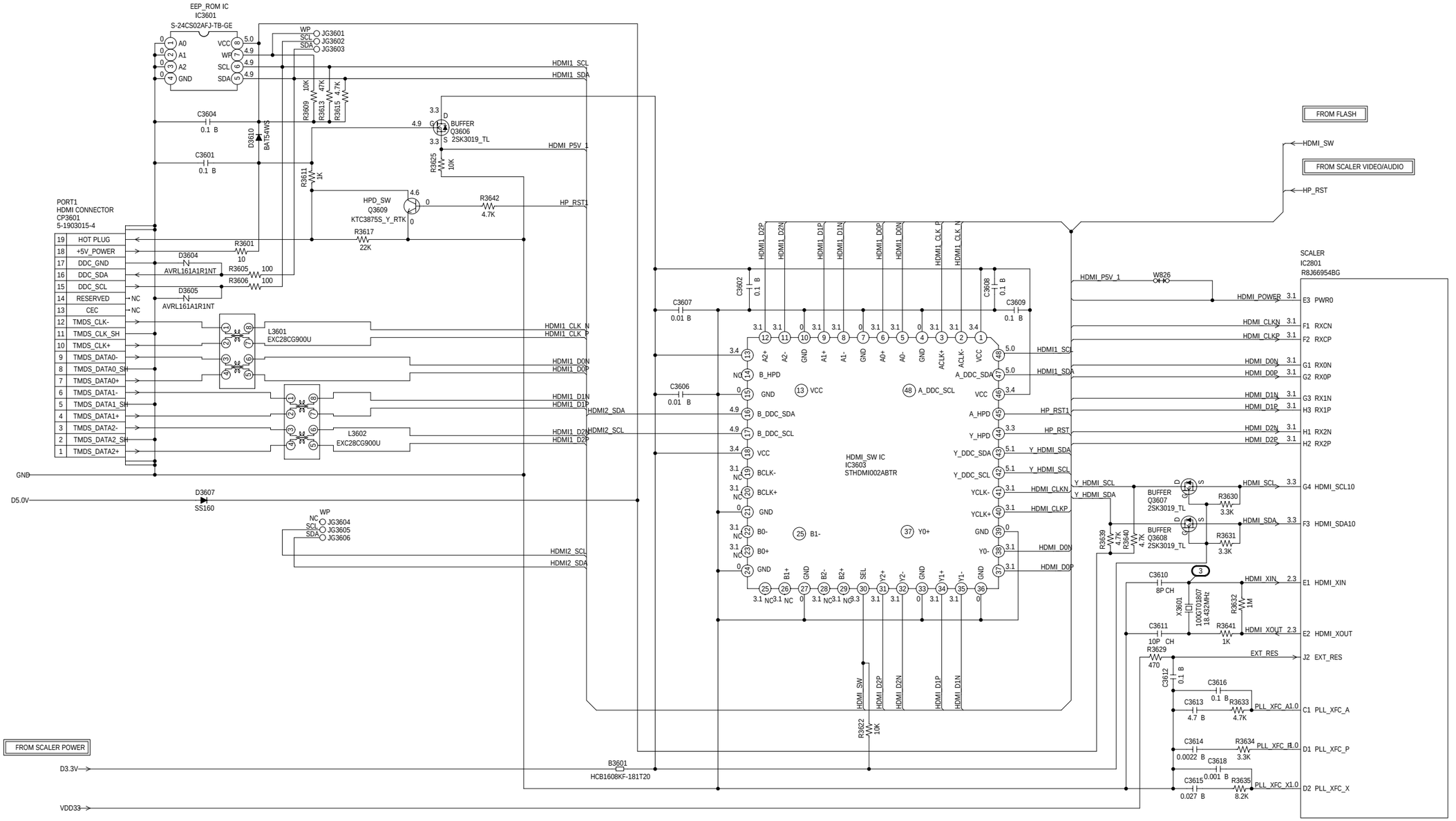
PCBDH0
CEG352

HDMI SCHEMATIC DIAGRAM

(DIGITAL PCB)



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JACK3 SCHEMATIC DIAGRAM

(DIGITAL PCB)

FROM/TO AUDIO/VIDEO

CP4301 (CP8501)
A2001WR-14A

1	SPDIF-134	DVD_SPDIF
2	GND	
3	ZERO	ZERO_MUTE
4	DVD_A_OUT_R	DVD_R
5	GND	
6	DVD_A_OUT_L	DVD_L
7	DVD_RESET	DVD_RESET
8	[Y]VIDEO	DVD_Y
9	GND	
10	[U]C_VIDEO	DVD_C
11	START_SW	START_SW
12	GND	
13	RX	TWIRE_TXDC
14	TX	TWIRE_RXDC

B4301 FCM1608KF-102T02
B4302 FCM1608KF-102T02
B4303 FCM1608KF-102T02
B4304 FCM1608KF-102T02
B4305 FCM1608KF-102T02
B4306 FCM1608KF-102T02
W827
W828
C4312 10P CH
C4314 10P CH
C4316 10P CH
R4301_1 MW 75 +-1%
R4302_1 MW 75 +-1%

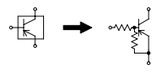
FROM/TO JACK2

CP4302 (CP8104)
TWG-P23P-A1

23	LOUT_SOUND	LOUT_SOUND
22	GND	
21	ROUT_SOUND	ROUT_SOUND
20	GND	
19	FILTER_MUTE	NC
18	POP_MUTE	POP_MUTE
17	YUV_SW_Y	AV3/AV4_Y
16	GND	
15	YUV_SW_U	AV3/AV4_PB
14	GND	
13	YUV_SW_V	AV3/AV4_PR
12	GND	
11	AUDIO_SW_R	SW_R
10	ASW2	ASW2
9	AUDIO_SW_L	SW_L
8	GND	
7	VIDEO2	AV2_CVBS
6	GND	
5	VIDEO1	AV1_CVBS
4	ASW1	ASW1
3	AV1_C	AV1_C
2	S1_DET	S1_DET
1	AV1_Y	AV1_Y

B4312 FCM1608KF-102T02
B4313 FCM1608KF-102T02
B4314 FCM1608KF-102T02
B4315 FCM1608KF-102T02
C4313 22P CH
C4315 22P CH
C4317 22P CH
C4321 22P CH
C4322 22P CH
C4326 22P CH
C4324 22P CH

CAUTION: DIGITAL TRANSISTOR



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NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

DVD-H
DVD_SPDIF
SPDIF
SPDIF_OUT
ROUT_FI
LOUT_FI
P.CON+9V
AT+5V
D5.0V
GND

DIGITAL AUDIO SW IC
IC6556
SN74LVC1G3157DCKR

R6551 100
R6552 100
C6553 1 6.3V 220 V-S
C6554_1 4.7 F
B6551 HCB1608KF-121T20

FROM REGULATOR2
D3.3V
GND

DB15ds
CP4303
1B630020

VGA-R	1	R4303 100
VGA-G	2	R4304 100
VGA-B	3	R4305 100
NC	4	
DGND	5	
AGND	6	R4343 75
AGND	7	R4346 75
AGND	8	R4347 75
NC	9	
DGND	10	
NC	11	
DDCD	12	
VGAHS	13	R4340 2.2K
VGAVS	14	R4344 2.2K
DDCC	15	R4332 3.3K, R4334 3.3K

D AUDIO DRIVER
Q4306
KTC3875S_Y_RTK

B4308 FCM1608KF-151T06
C4332 22 16V 100 V-S
R4322 1.5K
C4329 0.1 B
R4309 2.2K
C4335 0.022 B
R4323 3.3K
R4330 68
C4338 0.1 B
B4309 FCM1608CF-600T06
R4329 220
R4337 MW 100K
C4342 100P CH

FROM MICON
START_SW
EXT_MUTE-H

TO AV SWITCH2
SW_L
SW_R
AV1_Y
AV1_C
DVD_L
DVD_R
DVD_Y
DVD_C

FROM/TO SCALER VIDEO/AUDIO
PC_V
PC_H
S1_DET
AV1_CVBS
AV2_CVBS
VGA-R
VGA-G
VGA-B
AV3/AV4_Y
AV3/AV4_PB
AV3/AV4_PR
TWIRE_RXDC
TWIRE_TXDC
DVD-H
ROUT_FI
LOUT_FI
ASW2
ASW1
SPDIF

FROM MICON
DVD_RESET

FROM REGULATOR
D5.0V
P.CON+9V

FROM/TO SURROUND
ZERO_MUTE
LOUT_SOUND
ROUT_SOUND
POP_MUTE
GND

L4301 22uHNLCV32T
C4328 22 16V V-S

AMP Q4308 KTC3875S_Y_RTK
R4316 430K
R4320 8.2K
R4326 1K

AMP Q4310 KTC3875S_Y_RTK
R4335 430K
R4341 8.2K
C4339 10 C
R4345 1K
C4346 10 C
R4342 1K
R4336 68K
C4341 100P CH

AMP Q4312 KTC3875S_Y_RTK
R4350 MW 560
C4343 10 C
C4344 10 C
R4349 560
R4351 100K
R4352 100K
R4348 1K

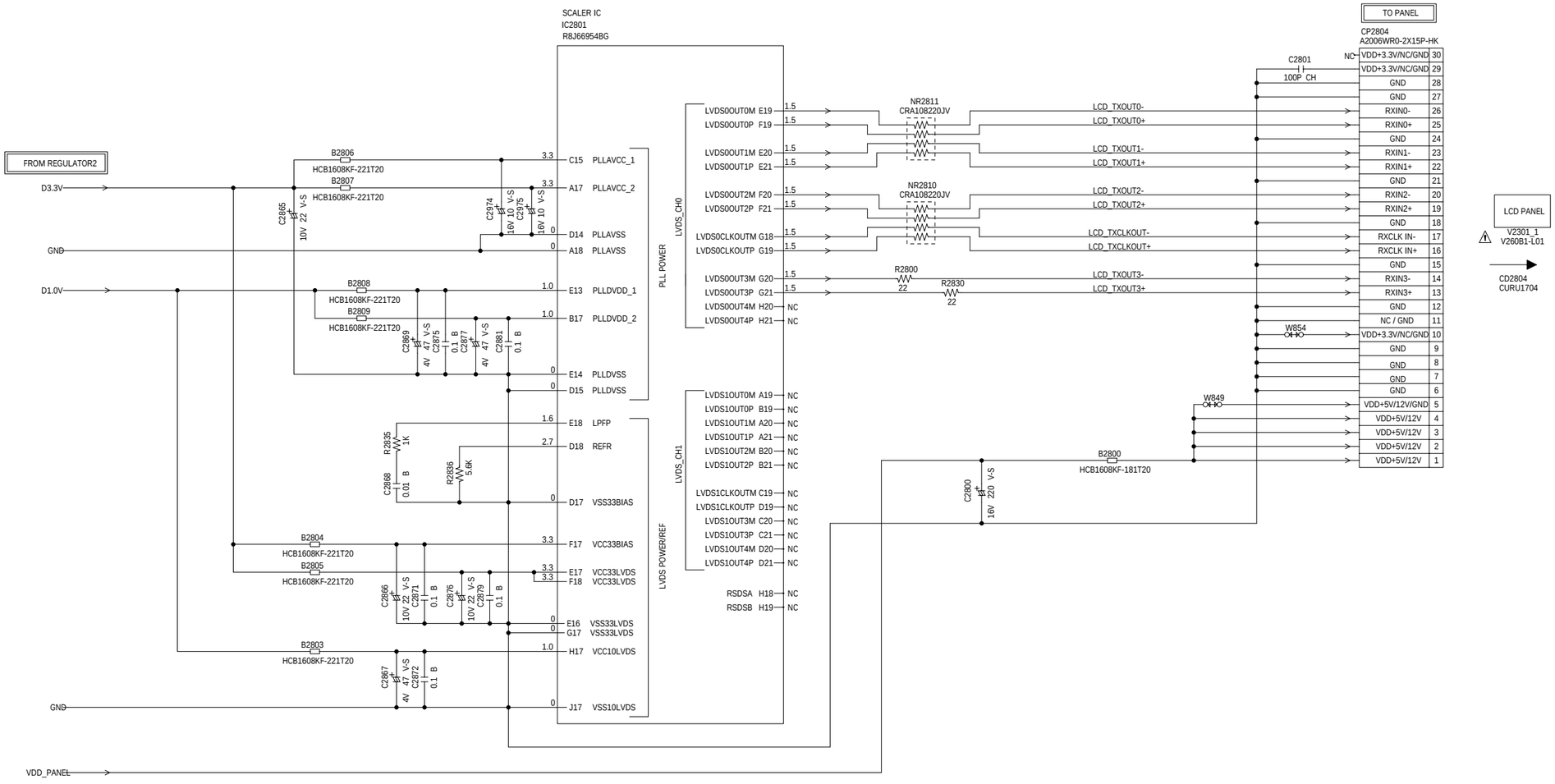
AUDIO OUT
J4301
AV3-13P2-60S1

MUTE_SW Q4303 KRA101SRTK
R4307 1.5K
C4333 10 C
AMP Q4304 KTC3875S_Y_RTK
C4336 100P CH
C4345 10 C
R4331 1K
R4306 10K
C4321 10 C
MUTE_SW Q4301 KTC3875S_Y_RTK
R4317 68K
R4321 1K
R4318 1K
R4319 1K
MUTE_SW Q4307 KTC3875S_Y_RTK
MUTE_SW Q4311 KTC3875 S_Y_RTK

PCBDH0
CEG352

LVDS SCHEMATIC DIAGRAM

(DIGITAL PCB)



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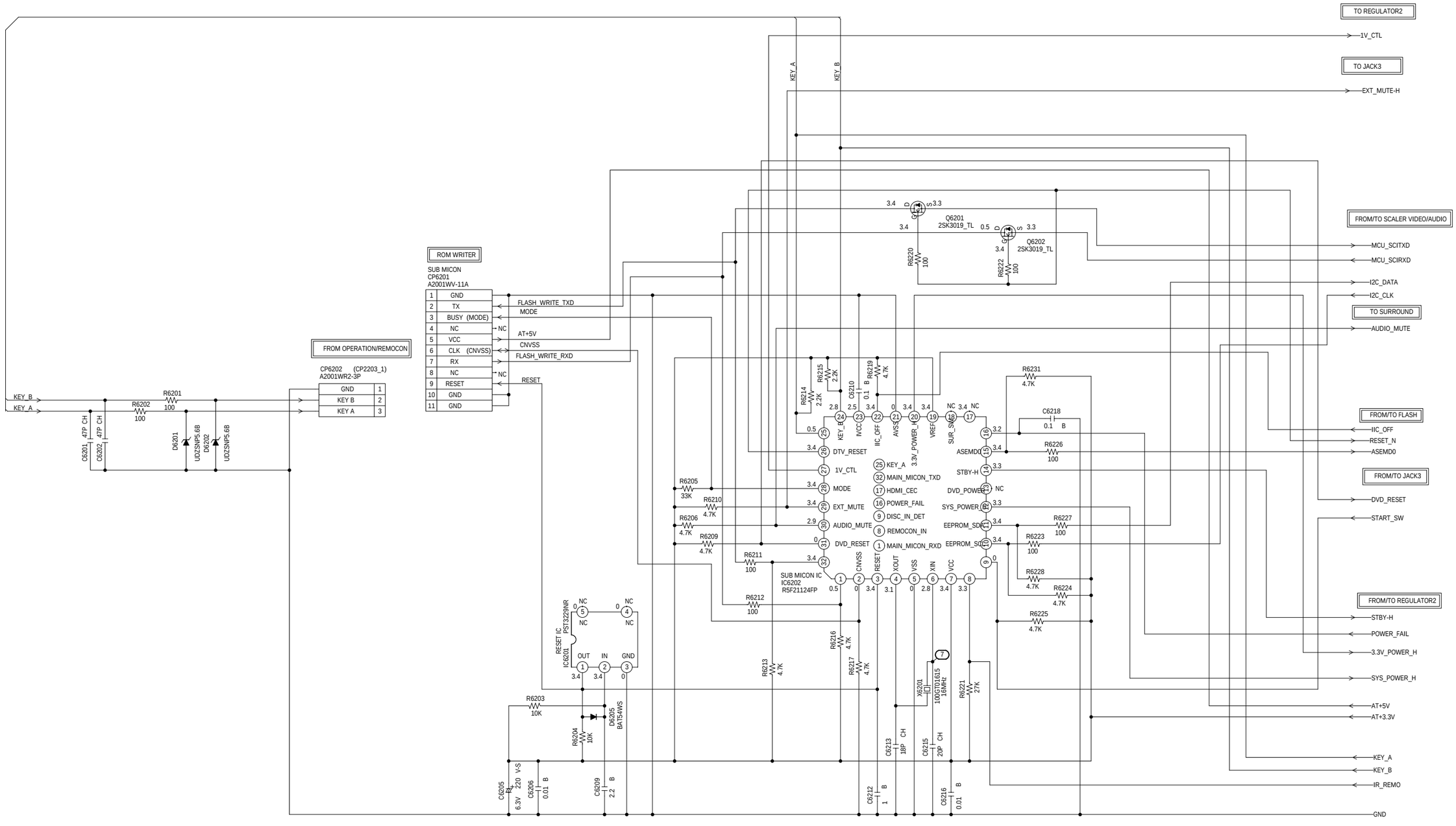
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

MICON SCHEMATIC DIAGRAM

(DIGITAL PCB)



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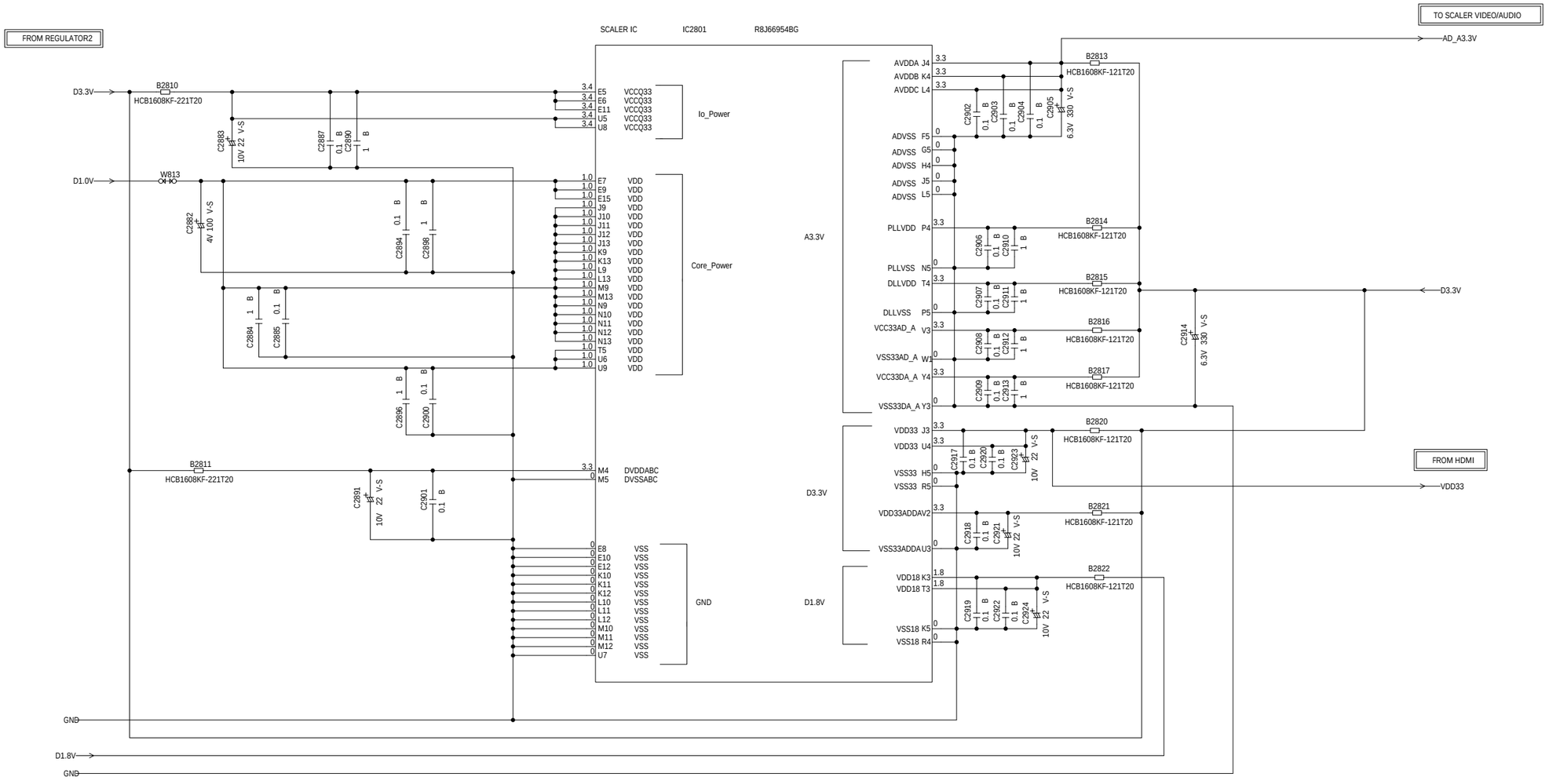
SCALER POWER SCHEMATIC DIAGRAM

(DIGITAL PCB)



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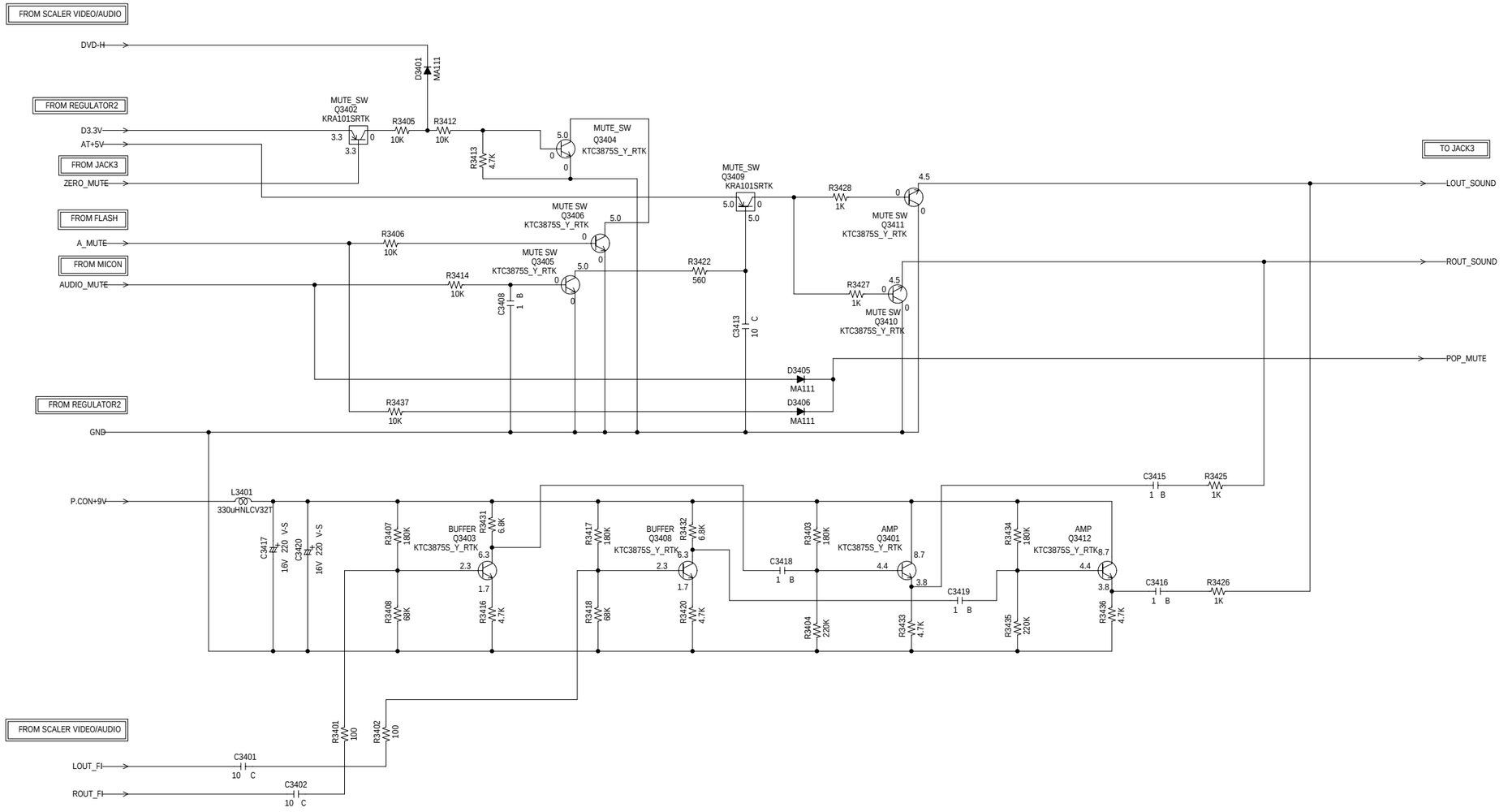
SURROUND SCHEMATIC DIAGRAM

(DIGITAL PCB)



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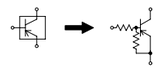
CAUTION: DIGITAL TRANSISTOR



PCBDH0
CEG352

TUNER SCHEMATIC DIAGRAM
(DIGITAL PCB)

TU5801 ENG36E19KF

NC(BB) NC NC NC SIF-out AGC V_OUT +5V TU +30V SDA SCL AFT +5V IF_OUT IF_AGC IF_OUT1 IF_OUT2

B5808 FCM1608K-102T02 B5809 FCM1608K-102T02 B5802 FCM1608KF-102T02 B5804 FCM1608KF-151T06

W878 TO SCALER VIDEO/AUDIO TU_CVBS L5801 22uHNLV25 C5814 33P CH

C5801 6.3V 220 V-S C5803 6.3V 220 V-S C5805 0.1 B C5806 0.1 B C5855 0.1 B C5857 0.1 B C5819 6.3V 220 V-S

R5801 150K R5802 47K R5803 100 R5804 100 R5807 100K

SIF_OUT TU_I2C_DATA TU_I2C_CLK IF_AGC IF_OUT_1 IF_OUT_2

FROM REGULATOR2

D3.3V D5.0V TUNER+30V GND

R5819 100 C5844 0.01 B C5946 56P CH L5805 0.22uHLQW18AN R5820 100 C5845 0.01 B

SCALER IC IC2801 R8J66954BG

AA1 ADIN1 Y1 ADIN0 W2 ADVREF0 Y2 ADVREF1 AA2 ADVREF2 — VSB_ADC

R5824 47K R5825 47K C5852 0.1 B C5853 0.1 B C5865 0.1 B

C5820 0.33 B C5821 47P CH C5822 47P CH

NEAR IC2401 R5823 1K C5847 0.1 B

AA7 IF_AGC — TUNER_IF

R5817 3.3K R5818 3.3K

TU_AFT — AA5 MCUADIN0 — MCU_ADC

R5822 47 R5821 47

TU_I2C_DATA — Y9 SICL0 — AA9 SIDA0 — IIC0

BTSC DEMODULATOR IC
IC5801 AN5832SA-E1V

C5823 0.33 B	PILOT DET	NC	NC		
C5818 0.22 B R5813 3.3K	PLL	L+R REF	C5833 2.2 B		
C5824 0.1 B	VCC	SAP DET	C5834 0.033 B		
	NC	NOISE DET	C5835 0.1 B		
SIF_OUT C5817 0.001 B	INPUT	SIF/BB	NC		
C5825 4.7 B	SIF REF	MUTE	NC		
C5826 2.2 B	STEREO REF	FOMO	NC		
R5810 100	SDA/SAPID	MODE	NC		
	GND	AGC SW	NC		
R5811 180K	PE	IIC/PARA			
R5812 100	SCL/STID	SPE FIL	C5837 0.022 B		
C5827 2.2 B	AGC DET	SPE DEL	C5838 0.1 B		
	ROUT	SPE TIME	C5839 3.3 B		
	LOUT	WB DET	C5840 0.33 B		
	NC	WB TIME	C5841 10 C		
C5830 2.2 B	L-R RBF	NC			

R5808 4.7K R5809 4.7K

FROM/TO SCALER VIDEO/AUDIO

I2C_DATA I2C_CLK D3.3V

BUFFER Q5802 2SK3019_TL BUFFER Q5801 2SK3019_TL

TO AV SWITCH2

TU_AUDIO_R TU_AUDIO_L

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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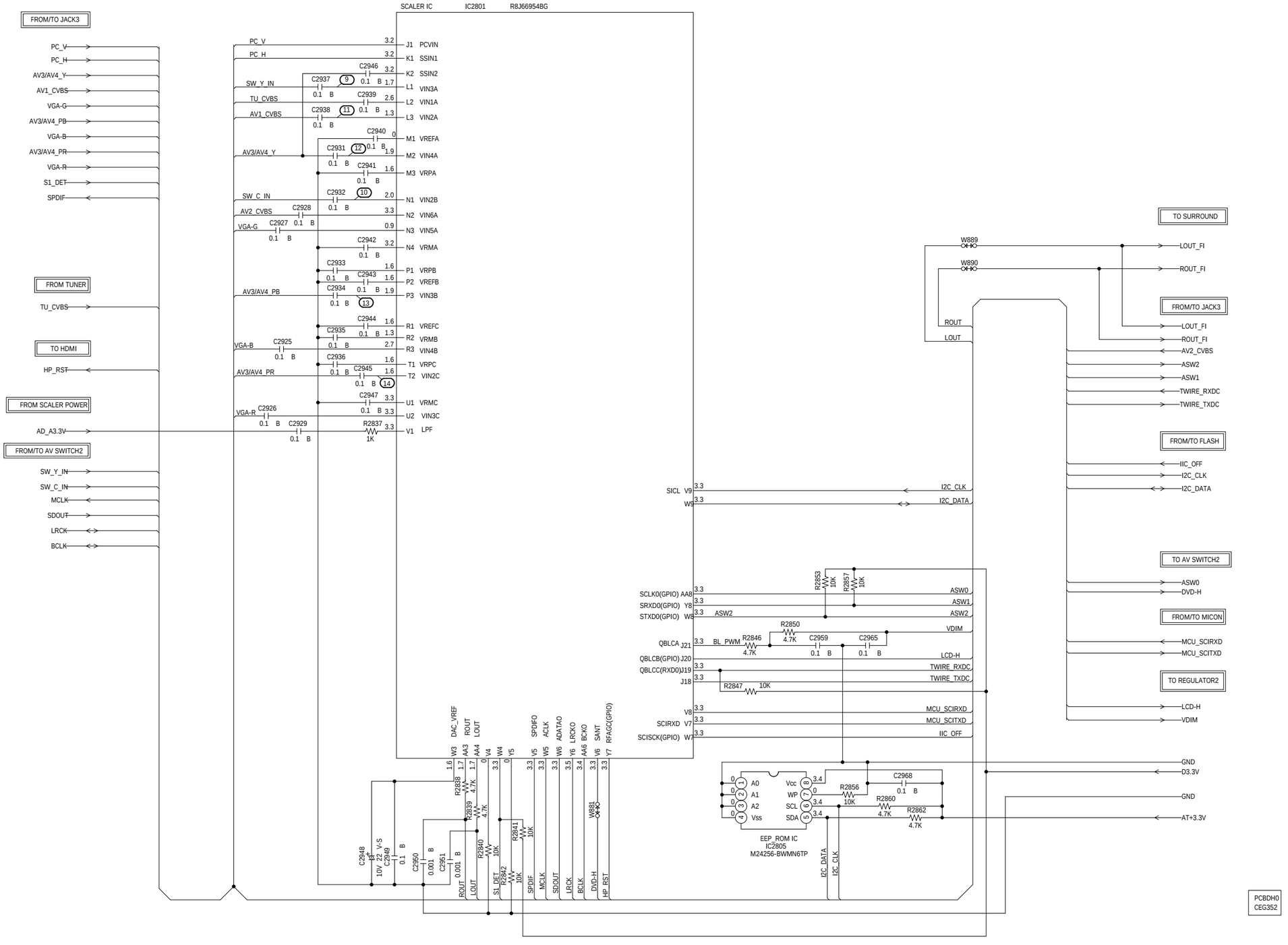
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

PCBDH0
CEG352

SCALER VIDEO/AUDIO SCHEMATIC DIAGRAM

(DIGITAL PCB)



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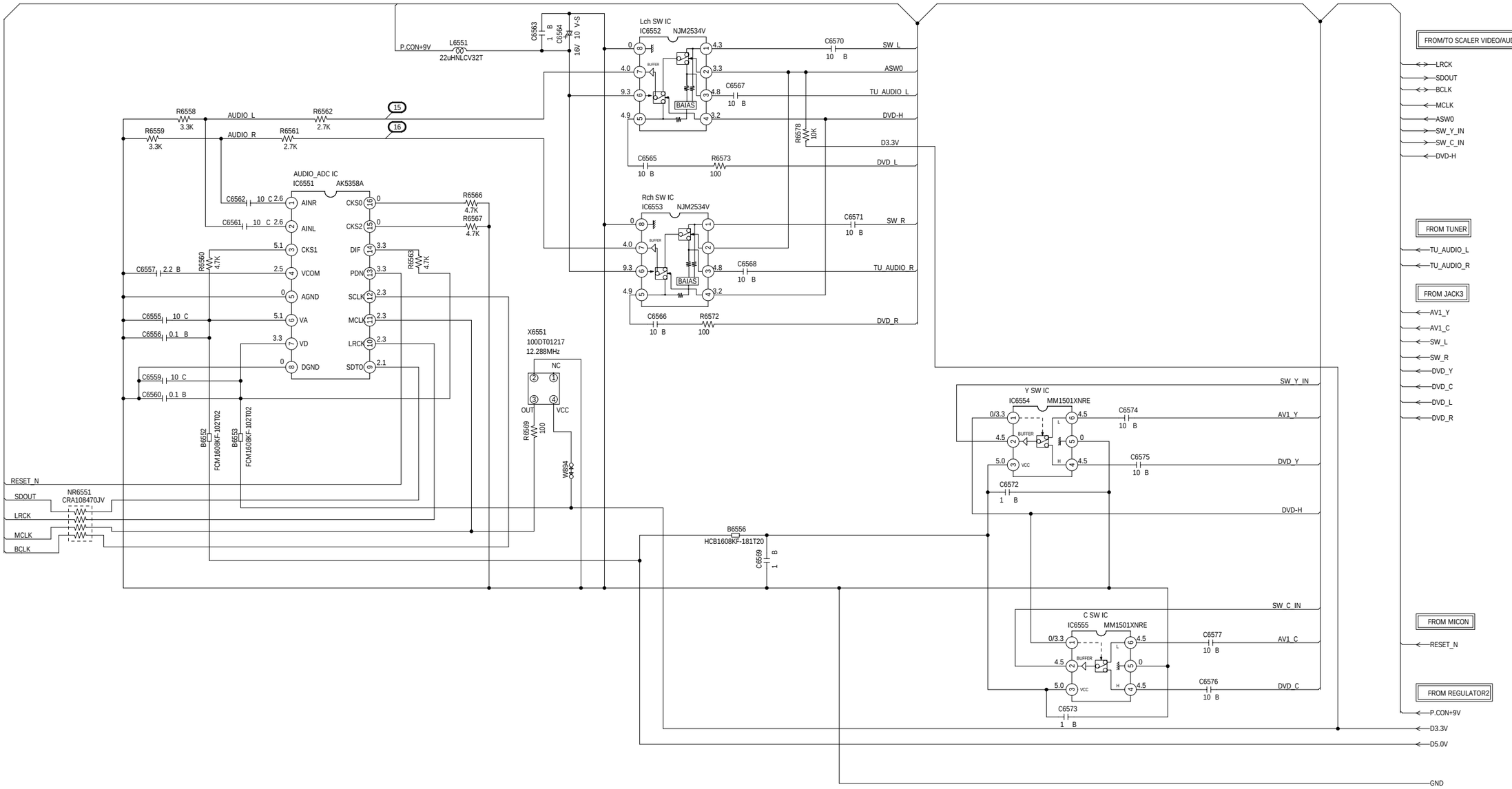
AV SWITCH2 SCHEMATIC DIAGRAM

(DIGITAL PCB)



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REGULATOR2 SCHEMATIC DIAGRAM

(DIGITAL PCB)

FROM/TO REGULATOR

CP3001 (CP401)
TWG-P23P-A1

1	TUNER+30V	TUNER+30V
2	POWER_FAIL	POWER_FAIL
3	SYS_POWER_H	SYS_POWER_H
4	AT+3.3V	AT+3.3V
5	GND	
6	P.CON+5V	D5.0V
7	AT+5V	AT+5V
8	AT+5V	
9	GND	
10	GND	
11	LCD+B	
12	LCD+B	VDD_PANEL
13	LCD_H	LCD-H
14	P.CON+9V	P.CON+9V
15	GND	
16	GND	
17	STBY_H	STBY-H
18	SW+12V → NC	
19	REMOCON_IN	IR_REMO
20	LIGHT_CTL	VDIM
21	KEY_A	KEY_A
22	LIGHT_POWER_H	BLON
23	KEY_B	KEY_B

C3003 0.001 B, R3001 100K, L3003 330uHNLCV32T, C3001_1 10P CH, C3036 47uF 16V 220 V-S, C3009 0.001 B

AT+5V, 1V_CTL, GND, 3.3V_POWER_H

L3001 22uH TSL0808, R3011 1K

VCC1.0V DC/DC
VDD CORE 1.05V IC
IC3001 BD9130NV
ADJ, VCC, ITH, GND, EN, PVCC, SW, PGND
R3016 1.5K +-1%, R3018 100 +-1%, R3008 10K, R3009 4.7K +-1%
C3015 0.1 B, C3016 680P CH, C3024 10 C, C3026 10 C, C3027 10 C, C3029 10 C, C3031 10 C, C3032 10 C, C3033 10 C
L3002 10uHTSL0808

B3003 HCB1608KF-181T20 (typ 1.8A) D1.0V

VCC+3.3V DC/DC
for CORE
R3022 0.047 1/4W, R3020 0.047 1/4W
C3013 6.3V 68 CD
VDD CORE 1.8V
IC3002 AL1015
VIN, V5/PWON, Vref/SS, CC, CS, EXT, GND, FB
DC DC FET IC3004 TPC6108
C3014 0.1 B, C3019 0.1 B
R3014 3.3K, R3019 33K, C3017 27P CH, C3011 0.1 B, C3012 0.01 B
SW Q3004 KRC103SRTK, SW Q3003 KRC103SRTK
R3010 1K
R3024 1.5K +-1%, R3025 220 +-1%, R3023 1K +-1%
L3004 22uH SLF10145T
B3004 HCB1608KF-181T20, B3005 HCB1608KF-181T20
C3021 0.001 B, C3022 68 CD 6.3V
D3004 EC31CS04
W900, W901
(SCALER:typ 1800mA)
D3.3V

W857, W858

1.8V_REGULATOR IC
IC3003
PQ0352N1HZPH
V_IN, VB, V_OUT, V_ADJ, GND
R3007 100
C3023 1 B, C3018 2.2 B, C3035 10 V-S 16V
R3015 6.8K +-1%, R3017 150 +-1%, R3013 3.3K +-1%
C3037 10 B, C3038 330 V-S 6.3V
L3005 22uH TSL0808
D1.8V (DDR2:typ 1095mA)

SH3001 YQ-12, SH3002 YQ-12, SH3003 YQ-12, SH3004 YQ-12, SH3005 YQ-12

TO FLASH
- D3.3V
- BLON
- GND

TO DDR2
- D1.8V
- GND

TO HDMI
- D3.3V
- GND
- D5.0V

FROM/TO SCALER VIDEO/AUDIO
- LCD-H
- AT+3.3V
- VDIM
- GND
- D3.3V

TO TUNER
- TUNER+30V
- D3.3V
- D5.0V

TO SURROUND
- P.CON+9V
- AT+5V
- D3.3V

TO LVDS
- D3.3V
- D1.0V
- VDD_PANEL
- GND

TO MICON
- SYS_POWER_H
- 3.3V_POWER_H
- AT+3.3V
- STBY-H
- KEY_A
- KEY_B
- IR_REMO
- POWER_FAIL
- AT+5V
- D3.3V
- 1V_CTL
- GND

TO SCALER POWER
- GND
- D3.3V
- D1.8V
- D1.0V

TO AV SWITCH2
- P.CON+9V
- D5.0V
- D3.3V

TO JACK3
- GND
- D5.0V
- P.CON+9V

PCBDH0
CEG352

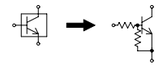
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

CAUTION: DIGITAL TRANSISTOR



POWER SCHEMATIC DIAGRAM
(POWER PCB)

F401 6.3A125V 51MS063L
FH401 EYF-52BCY
FH402 EYF-52BCY
6.3A 125V
J401 YKE31-0149N
BLACK
WHITE
CP404 003P-2100
D404_1 ENE241D-10A-Q6
C402 0.22 275V ECQUL
R404 1.2M 1W RCR60
C448 0.22 275V ECQUL
C404 0.0022 250V KX
COIL,LINE FILTER L401 SS30V-R200132
COIL,LINE FILTER L402_1 SS11V-R22020-CH (SMALL)
SH402 YQ-12
SH410 YQ-12
D415 1N4005-EIC
D418 1N4005-EIC
C406 0.0022 250V KX
R497 1 1W
D432_2 RL106F-E
R436 68K 1/2W
C430 0.0022 2KV R
T402
81190084
R447 15 1/4W
D444 1F5-E
C442_1 47 50V MHE
AT+34V
R523 100K
AT+5V
L413 10uH TSL0808
C444 2200 6.3V YK
C440_1 2200 6.3V ZL
D443 31DQ09-FC
P_GND
C441_1 2.2 50V YXF
R458 10K 4.4 5.2
R460 47K
D442 1H3-E
R445 100 1/4W
D445 MTZJ15B
R452 1K 1/4W
POWER FAIL SWITCH Q416 KTA1504S_Y_RTK
R505 18K
POWER_FAIL
FEED BACK IC410 PS2561AL1-1-V(W)
R441 15K 5.0
R443 1K
REGULATOR IC IC404 KIA431A-AT
CATHODE ANODE REFERENCE
R454 330 +-1%
R455 2.2K +-1%
R456 2.2K +-1%
R451 1K
C443 0.01 B
FROM/TO POWER2
AT+5V
INV_SW+24V
SW+12V[UNREG]
INV_GND
SYS_POWER_H
P_GND
SW REGULATOR CONTROL IC IC402 MIP2F4
D S S
Vcc CL FB Vdd
164.0 0 0
16.0 2.5 1.0 5.9
R433 270K
C428 0.001 B
C455_1 200V 47 PX
C493_1 50V 47 MHE
C426 0.1 B
C429 0.1 B
C431_1 50V 10 YXF
R531 220K
R532 220K
R533 220K
R534 220K
R535 220K
R536 220K
R537 220K
R538 180K
R539 180K
R540 100K
R541 180K
R542 180K
R543 180K
R544 220K
R545 220K
R546 10K
R549 10K
C483 50V 10 YXF
R437 2.2 1/4W
D433 1H3-E
Q418 2SA1759_T100
Q424 KTC3875S_Y_RTK
Q425 SSM3K302T (TE85L,F)
VCC SW Q401 KTA1281_Y
R463 22K
R466 22K
R469 10K
PROTECT Q404 KTA1504S_Y_RTK
D408 1SS133
R401 10K 1/4W
R521 22K
W889 0
VCC SW Q403 KRC102SRTK
C405 0.1 B
Q405 KTC3875S_Y_RTK
C419 2.2 B
C495 2.2 B
R472 2.2K
R506 100 1/4W
D424 MTZJ3.3B
OVP PROTECT IC405 PS2561AL1-1-V(W)
POWER SW IC406 PS2561AL1-1-V(W)
R494 1K
R475 220 1/4W
D413 MTZJ30B
INV_SW+24V
R478 470 1/4W
AT+5V
SOFT SWITCH Q412 SSM3K302T
R476 10K
R477 4.7K 1/4W
SYS_POWER_H
R439 1K
P_GND
TO SOUND
SOUND_GND
SOUND+B
D405 1N5406FL-6737
R412 0.22 1W
B404 W5RH3.5X5X1.0
R429 1M 1/4W RCR
C423 630V 0.082 FGSM
B401 W5RH3.5X5X1.0
POWER CONTROL IC IC401 MP3A5038
D421 EC31QS04
R428 330 1/2W
R536 270 1/2W
Q2 DRIVE Q407 KTA1281_Y
Q406 2SC2120Y
R471 75K
R431 10K 1/2W
R511 39K 1/2W
D410 1SS133
D411 1SS133
C475 0.0018 M
R508 47K
R420 47K
R427 47K
R416 10 1/4W
T401 81400854
Vcc
GND
DC INPUT
NC
D416 31DQ06-FC
6V
12V
GND
GND
24V
24V
S+B
S GND
D435 ERC91-02
W887
W840
SOUND+B
R522 47K 1/4W
C433_1 1000 35V ZL
C462_1 1000 16V ZL
SOUND_GND
L411 10uH
SW+12V[UNREG]
D440 YG862C15R
C435_1 1000 25V ZL
R528 100 1/4W
P_GND
FROM/TO REGULATOR
POWER_FAIL
AT+34V
SW+6V[UNREG]
SYS_POWER_H
R404 1.2M 1W RCR60
C403_1 390 200V EE
R434 1.2 7W
W834
C404_1 390 200V EE
D407 1N5406FL-6737
R406 0.047 1W
R410 820 1/4W
C408 470P B
C409 0.1 B
R411 10K
HS403 763WAA0367
NC NC
C407_3 35V 100 MHE
C418 0.001 B
R498 100 1/4W
C412 0.1 B
R414 10K
C411 1 B
C414 0.0022 B
R417 100K
D412 MTZJ3.9B
R423 2.2K 1/2W
R421 2.2K 1/2W
W886
R432 22 1W 2KV
C401 0.0015 R 2KV
D437 FCH10A20
HS405 763WAA0365
C434_1 1200 35V ZL
C436_1 1200 35V ZL
W822
INV_GND
R438 2.2K 1/4W
R503 470 1/2W
C439 220P B
C437_1 0.033 100V MMTS
R446 10K
REGULATOR IC IC403 KIA431A-AT
CATHODE ANODE REFERENCE
R448 39K +-1%
R449 6.8K +-1%
R450 3.9K +-1%
R467 75K +-1%
C494_1 4.7 50V MHE
R435 1K
FEED BACK IC408 PS2561AL1-1-V(W)
SH406 YQ-12
P_GND
CAUTION: Ⓗ IS THE LIVE CONNECTION
PCB240
CEG353

6.3A 125V

CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F401).

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F401).

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

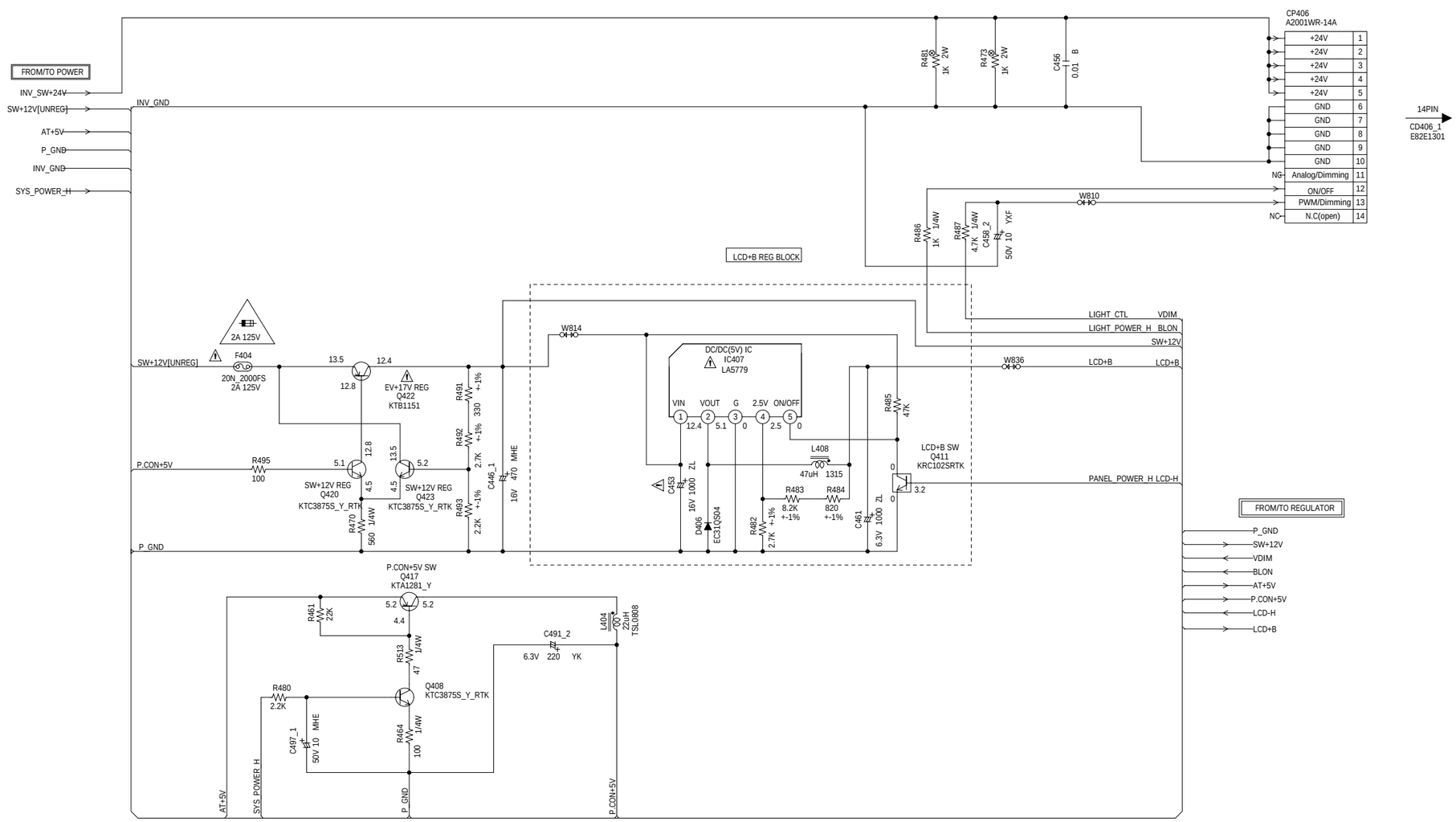
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: DIGITAL TRANSISTOR

POWER2 SCHEMATIC DIAGRAM

(POWER PCB)



PCB240
CEG353

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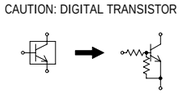
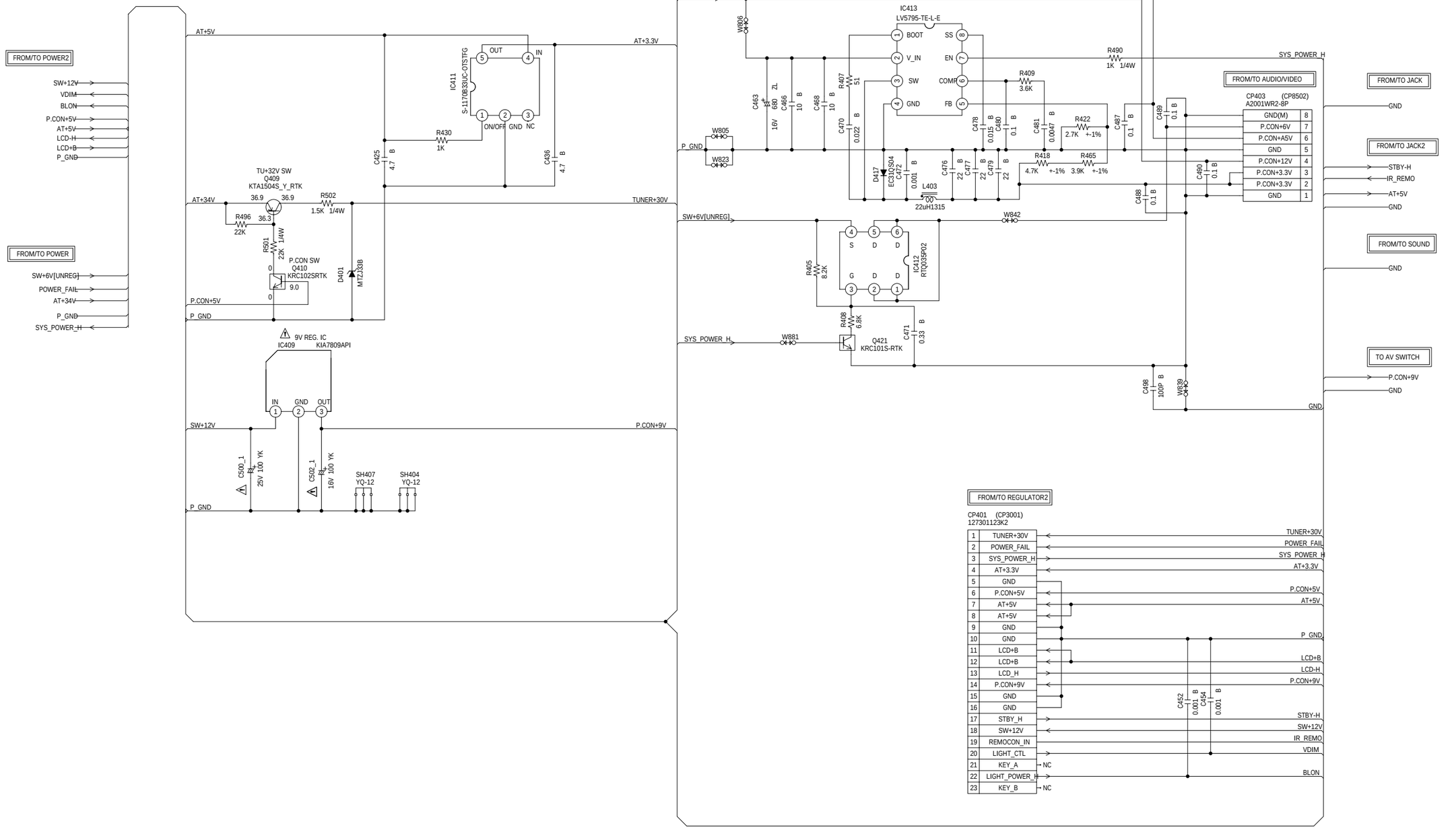
CAUTION: DIGITAL TRANSISTOR



REGULATOR SCHEMATIC DIAGRAM

(POWER PCB)



PCB240
CEG353

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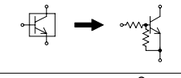
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

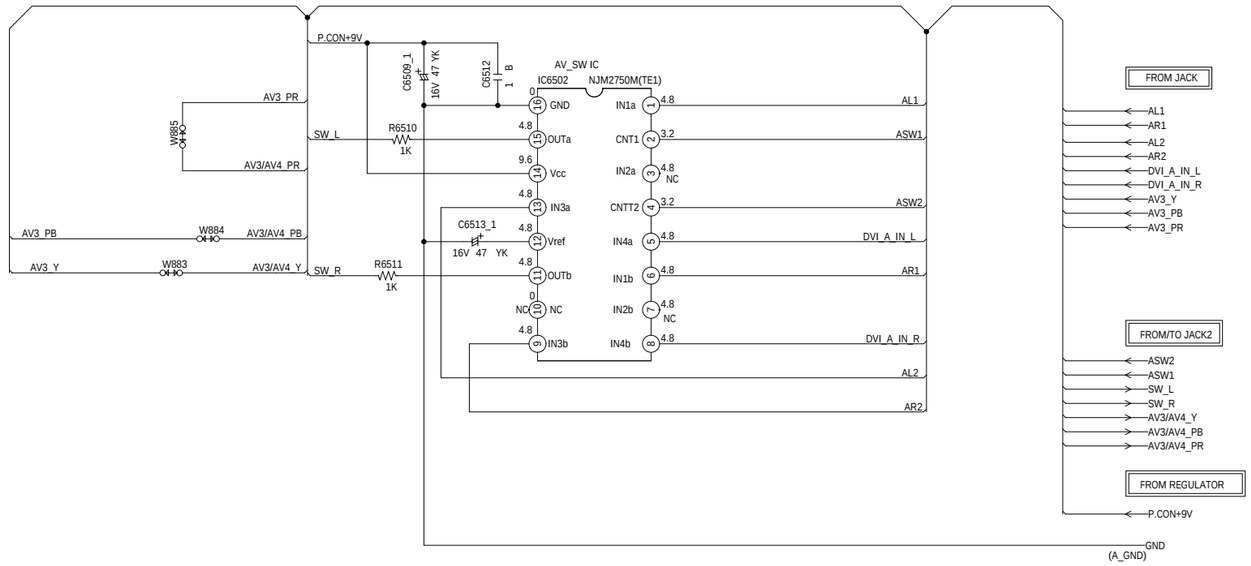
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CAUTION: DIGITAL TRANSISTOR



AV SWITCH SCHEMATIC DIAGRAM

(POWER PCB)



PCB240
CEG353

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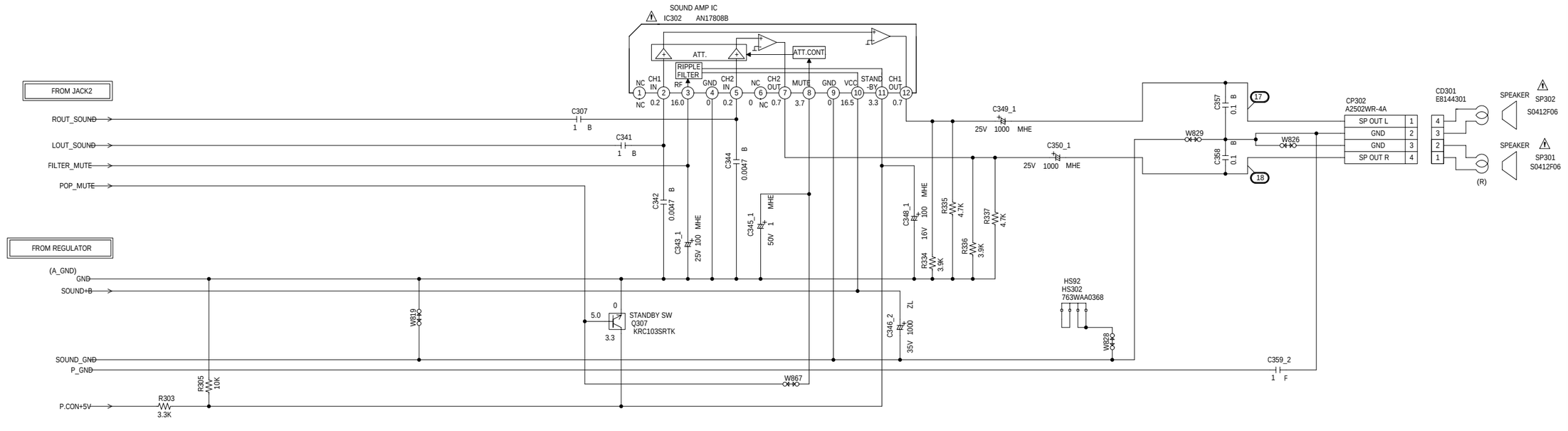
SOUND SCHEMATIC DIAGRAM

(POWER PCB)



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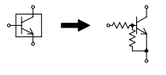
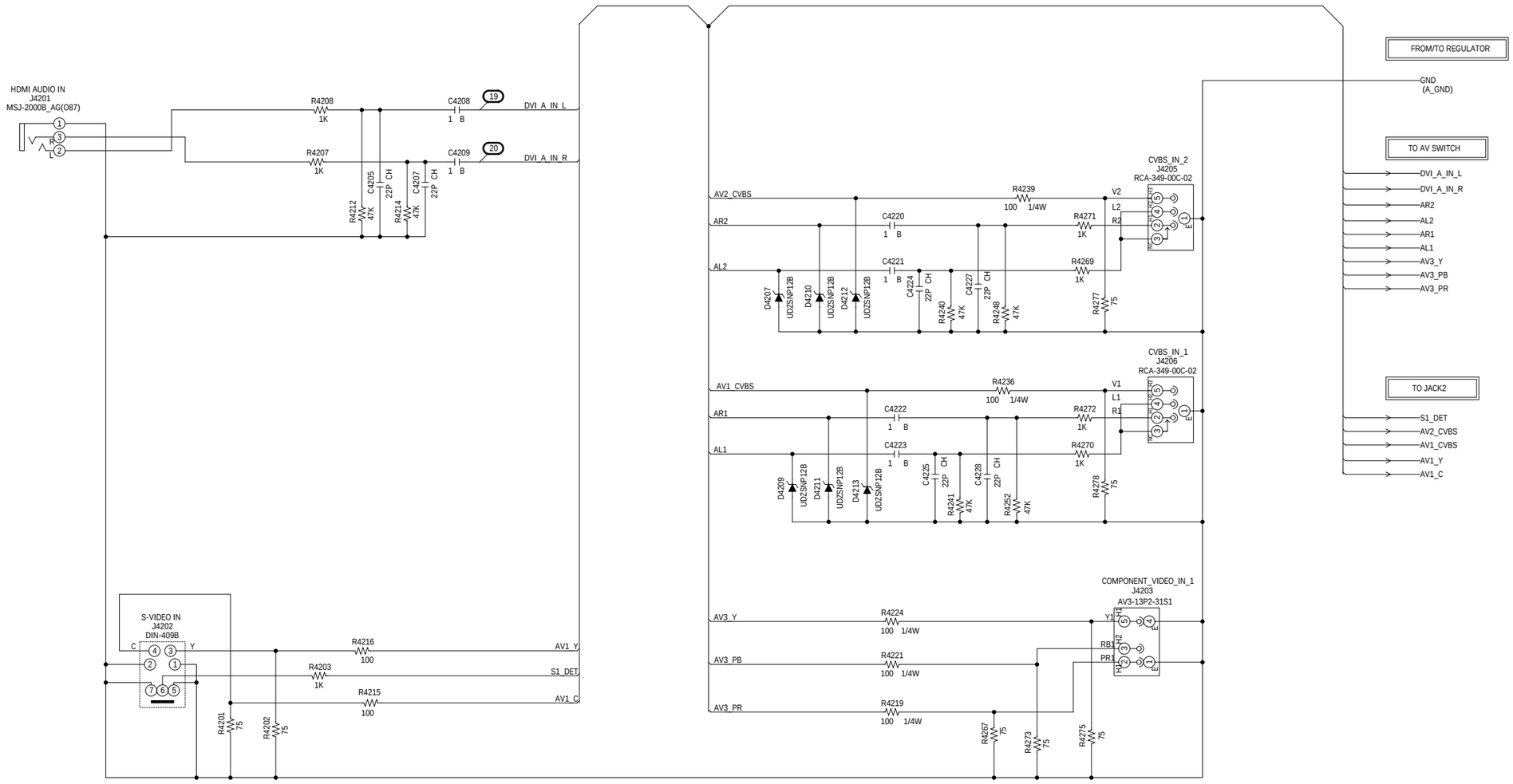
CAUTION: DIGITAL TRANSISTOR



PCB240
CEG353

JACK SCHEMATIC DIAGRAM

(POWER PCB)



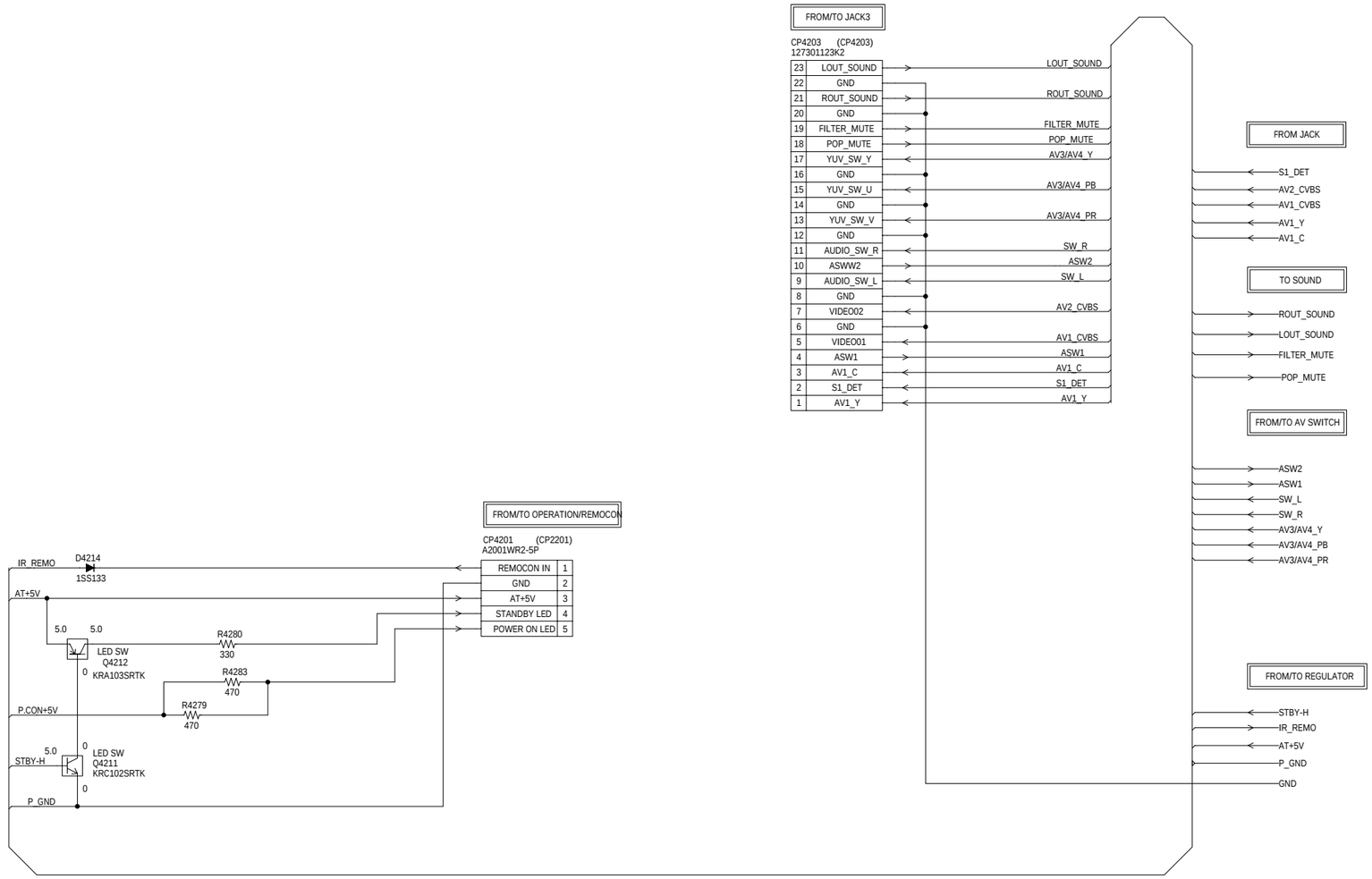
PCB240
CEG353

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

JACK2 SCHEMATIC DIAGRAM

(POWER PCB)



PCB240
CEG353

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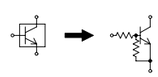
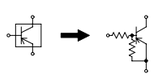
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR

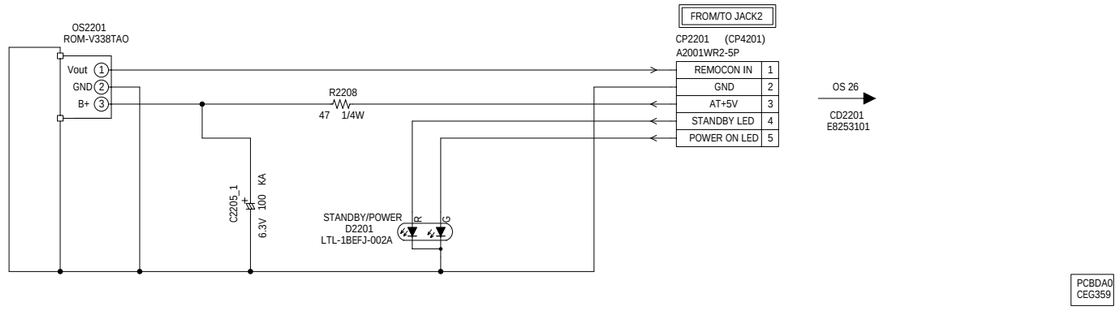


CAUTION: DIGITAL TRANSISTOR

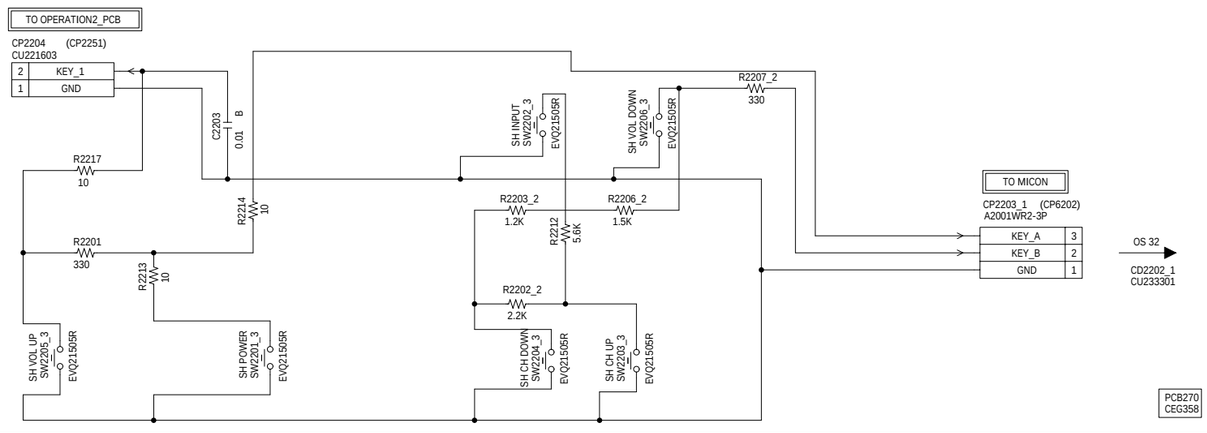


OPERATION/REMOCON SCHEMATIC DIAGRAM

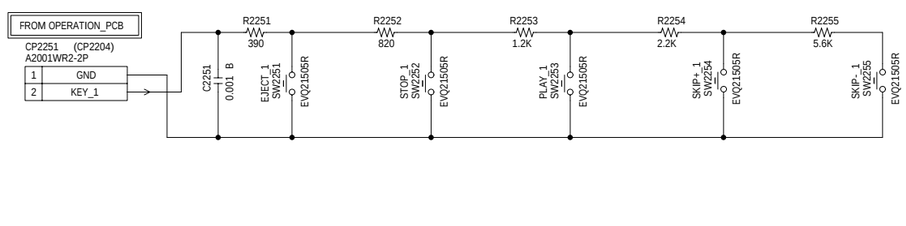
(REMOCON PCB)



(OPERATION PCB)



(OPERATION2 PCB)



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INTERCONNECTION DIAGRAM

COMPONENT_VIDEO_IN_1
J4203

CVBS_IN_1
J4206

CVBS_IN_2
J4205

S-VIDEO IN
J4202

HDMI AUDIO IN
J4201

14PIN
CD406_1

SP302
SPEAKER
(L)

SP301
SPEAKER
(R)

CD301

CP302

1	SP OUT L	4
2	GND	3
3	GND	2
4	SP OUT R	1

CP406

1	+24V
2	+24V
3	+24V
4	+24V
5	+24V
6	GND
7	GND
8	GND
9	GND
10	GND
11	Analog/Dimming
12	ON/OFF
13	PWM/Dimming
14	N.C(open)

CD3805
BLACK
WHITE

J401

POWER PCB
PCB240
CEG353

CP4203 / CP4302

AV1_Y	1	1→1	1	AV1_Y	
S1_DET	2	2→2	2	S1_DET	
AV1_C	3	3→3	3	AV1_C	
ASW1	4	4←4	4	ASW1	
VIDEO01	5	5→5	5	VIDEO1	
GND	6	6—6	6	GND	
VIDEO02	7	7→7	7	VIDEO2	
GND	8	8—8	8	GND	
AUDIO_SW_L	9	9→9	9	AUDIO_SW_L	
ASWW2	10	10←10	10	ASW2	
AUDIO_SW_R	11	11→11	11	AUDIO_SW_R	
GND	12	12—12	12	GND	
YUV_SW_V	13	13→13	13	YUV_SW_V	
GND	14	14—14	14	GND	
YUV_SW_U	15	15→15	15	YUV_SW_U	
GND	16	16—16	16	GND	
YUV_SW_Y	17	17→17	17	YUV_SW_Y	
POP_MUTE	18	18←18	18	POP_MUTE	
FILTER_MUTE	19	19←19	19	FILTER_MUTE	
GND	20	20—20	20	GND	
ROUT_SOUND	21	21←21	21	ROUT_SOUND	
GND	22	22—22	22	GND	
LOUT_SOUND	23	23←23	23	LOUT_SOUND	

CP401 / CP3001

TUNER+30V	1	1→1	1	TUNER+30V	
POWER_FAIL	2	2→2	2	POWER_FAIL	
SYS_POWER_H	3	3←3	3	SYS_POWER_H	
AT+3.3V	4	4←4	4	AT+3.3V	
GND	5	5—5	5	GND	
P.CON+5V	6	6→6	6	P.CON+5V	
AT+5V	7	7→7	7	AT+5V	
AT+5V	8	8→8	8	AT+5V	
GND	9	9—9	9	GND	
GND	10	10—10	10	GND	
LCD+B	11	11→11	11	LCD+B	
LCD+B	12	12→12	12	LCD+B	
LCD_H	13	13→13	13	LCD_H	
P.CON+9V	14	14←14	14	P.CON+9V	
GND	15	15—15	15	GND	
GND	16	16—16	16	GND	
STBY_H	17	17←17	17	STBY_H	
SW+12V	18	18←18	18	SW+12V	NC
REMOCON_IN	19	19←19	19	REMOCON_IN	
LIGHT_CTL	20	20←20	20	LIGHT_CTL	
KEY_A	21	21—21	21	KEY_A	NC
LIGHT_POWER_H	22	22←22	22	LIGHT_POWER_H	
KEY_B	23	23←23	23	KEY_B	NC

CP4201

REMOCON IN	1	1→1	1	REMOCON IN	
GND	2	2→2	2	GND	
AT+5V	3	3→3	3	AT+5V	
STANDBY LED	4	4←4	4	STANDBY LED	
POWER ON LED	5	5←5	5	POWER ON LED	

CD2201

1	1→1	1			
2	2→2	2			
3	3→3	3			
4	4←4	4			
5	5←5	5			

CP2201

REMOCON IN	1	1→1	1	REMOCON IN	
GND	2	2→2	2	GND	
AT+5V	3	3→3	3	AT+5V	
STANDBY LED	4	4←4	4	STANDBY LED	
POWER ON LED	5	5←5	5	POWER ON LED	

REMOCON PCB
PCBDA0
CEG359

COMMAND TRANSMITTER
TM101

OS2201
1 Vout
2 GND
3 B+

STANDBY/POWER
D2201
R
G

CP2251

GND	1	1→1	1	GND	
KEY_1	2	2→2	2	KEY_1	

OPERATION2 PCB
PCB280
CEG361

CP2204

1	GND	1→1	1	GND	
2	KEY_1	2→2	2	KEY_1	

OPERATION PCB
PCB270
CEG358

CP2203_1 / CD2202_1

GND	1	1→1	1	GND	
KEY B	2	2→2	2	KEY B	
KEY A	3	3→3	3	KEY A	

DB15ds
CP4303

1	VGA-R	
2	VGA-G	
3	VGA-B	
4	NC	NC
5	DGND	
6	AGND	
7	AGND	
8	AGND	
9	NC	NC
10	DGND	
11	NC	NC
12	DDCD	NC
13	VGAHS	
14	VGAVS	
15	DDCC	NC

CP6202

1	GND
2	KEY B
3	KEY A

AUDIO OUT
J4301

CP2801

1	GND	
2	SCL	
3	SDA	
4	IIC_OFF	
5	D_GND	
6	PC_TOOL_RX	
7	PC_TOOL_TX	
8	D3.3V	
9	NC	NC

CP2803

1	TCK	
2	TRST_N	
3	TDO	
4	ASEBRKAK_N	
5	TMS	
6	TDI	
7	RESET_N	
8	FLASH_WP	
9	ASEMD0	
10	GND	
11	VDD33	
12	GND	

SUBMICON
CP6201

1	GND	
2	TX	
3	BUSY (MODE)	
4	NC	NC
5	VCC	
6	CLK (CNVSS)	
7	RX	
8	NC	NC
9	RESET	
10	GND	
11	GND	

(PORT1)
HDMI CONNECTOR
CP3601

TMDS_DATA2+	1	
TMDS_DATA2_SH	2	
TMDS_DATA2-	3	
TMDS_DATA1+	4	
TMDS_DATA1_SH	5	
TMDS_DATA1-	6	
TMDS_DATA0+	7	
TMDS_DATA0_SH	8	
TMDS_DATA0-	9	
TMDS_CLK+	10	
TMDS_CLK_SH	11	
TMDS_CLK-	12	
CEC	13	
RESERVED	14	NC
DDC_SCL	15	
DDC_SDA	16	
DDC_GND	17	
+5V_POWER	18	
HOT PLUG	19	

TU5801

1	NC(BB)	NC
2	NC	NC
3	NC	NC
4	NC	NC
5	SIF-out	
7	AGC	NC
8	V_OUT	
9	+5V	
11	TU	NC
12	+30V	
14	SDA	
15	SCL	
16	AFT	
17	+5V	
18	IF_OUT	NC
19	IF_AGC	
20	IF_OUT1	
21	IF_OUT2	

CP4301 / CD8501 / CP8501

SPDIF-134	1	1→1	1	SPDIF-134	
GND	2	2→2	2	GND	
ZERO	3	3→3	3	ZERO	
DVD_A_OUT_R	4	4→4	4	DVD_A_OUT_R	
GND	5	5—5	5	GND	
DVD_A_OUT_L	6	6→6	6	DVD_A_OUT_L	
DVD_RESET	7	7→7	7	DVD RESET	
[Y]VIDEO	8	8→8	8	[Y]_VIDEO	
GND	9	9—9	9	[V]Y_VIDEO	
[U]C_VIDEO	10	10→10	10	[U]C_VIDEO	
START_SW	11	11→11	11	START_SW	
GND	12	12→12	12	GND	
RX	13	13→13	13	SSCTXD/RX	
TX	14	14→14	14	SSCRXD/TX	

CP403 / CD8502 / CP8502

GND	1	1→1	1	GND	
P.CON+3.3V	2	2→2	2	P.CON+3.3V	
P.CON+3.3V	3	3→3	3	P.CON+3.3V	
P.CON+12V	4	4→4	4	P.CON+12V	
GND	5	5—5	5	GND	
P.CON+A5V	6	6→6	6	P.CON+A5V	
P.CON+6V	7	7→7	7	P.CON+6V	
GND(M)	8	8→8	8	GND(M)	

POWER PCB
PCB240
CEG353

CP2804

VDD+3.3V/NC/GND	30	NC
VDD+3.3V/NC/GND	29	
GND	28	
GND	27	
RXIN0-	26	
RXIN0+	25	
GND	24	
RXIN1-	23	
RXIN1+	22	
GND	21	
RXIN2-	20	
RXIN2+	19	
GND	18	
RXCLK IN-	17	
RXCLK IN+	16	
GND	15	
RXIN3-	14	
RXIN3+	13	
GND	12	
GND	11	
VDD+3.3V/NC/GND	10	
GND	9	
GND	8	
GND	7	
GND	6	
VDD+5V/12V/GND	5	
VDD+5V/12V	4	
VDD+5V/12V	3	
VDD+5V/12V	2	
VDD+5V/12V	1	

DIGITAL PCB
PCBDH0
CEG352

CD2804

LCD PANEL

V2301_1

CP2301_1 / FFC

GND	1	1→1	1	GND	
F	2	2→2	2	F	
Vref	3	3→3	3	Vref	
VCC	4	4→4	4	VCC	
E	5	5→5	5	E	
D	6	6→6	6	D	
C	7	7→7	7	C	
SW1(DVD/CD)	8	8→8	8	SW1(DVD/CD)	
VRF(RF_OUT)	9	9→9	9	VRF(RF_OUT)	
B	10	10→10	10	B	
A	11	11→11	11	A	
VR(DVD)	12	12→12	12	VR(DVD)	
VR COM	13	13→13	13	VR COM	
VR(CD)	14	14→14	14	VR(CD)	
GND	15	15—15	15	GND	
LD(CD)	16	16→16	16	LD(CD)	
PD/GND	17	17→17	17	PD/GND	
LD(DVD)	18	18→18	18	LD(DVD)	
GND	19	19—19	19	GND	
NC	20	20→20	20	NC	NC
T DRV	21	21→21	21	T DRV	
T RTN	22	22→22	22	T RTN	
F DRV	23	23→23	23	F DRV	
F RTN	24	24→24	24	F RTN	

CP2302 / FFC

LD+	1	1→1	1	LD-	
LD-	2	2→2	2	LD+	
GND(D)	3	3→3	3	OPEN	
OPEN	4	4→4	4	GND(D)	
CLOSE	5	5←5	5	CLOSE	

CP2303 / FFC

SP1+	1	1→1	1	SP1+	
SP1-	2	2→2	2	SP1-	
SLD+	3	3→3	3	SLD+	
SLD-	4	4→4	4	SLD-	
LIMIT SW	5	5←5	5	LIMIT SW	
SW(GND)	6	6←6	6	SW(GND)	

DVD MT PCB
PCB130
DMG097

DSM2(06SD)

SLOT IN DVD
DRIVE
DK1
CV_VTM101A

OPTICAL PICK-UP

SPINDLE MOTOR

LOADING MOTOR

SLED MOTOR

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

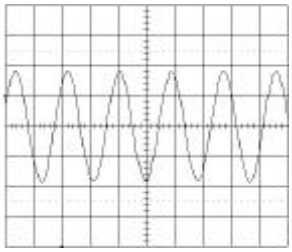
ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

WAVEFORMS

FLASH

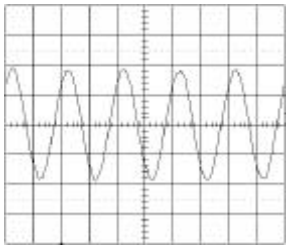
20ns
200mV

1



20ns
200mV

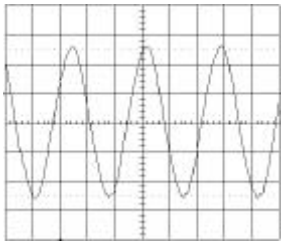
2



HDMI

20ns
200mV

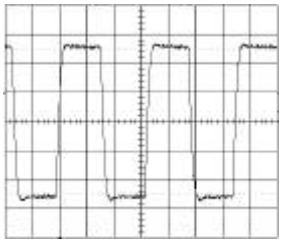
3



JACK 3

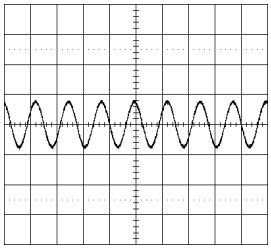
0.2us
200mV

4



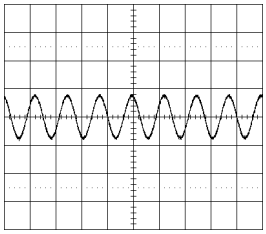
2ms
500mV

5



2ms
500mV

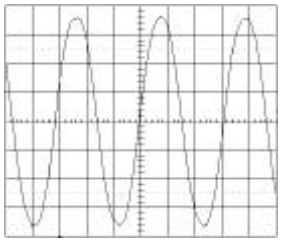
6



MICON

20ns
200mV

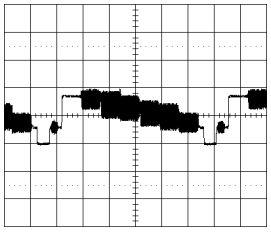
7



TUNER

10us
0.5V

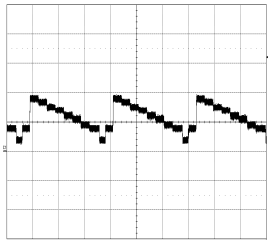
8



SCALER VIDEO/AUDIO

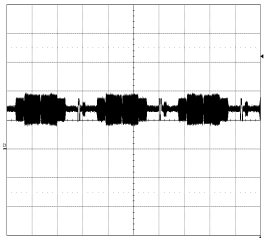
20us
500mV

9



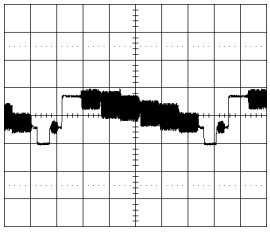
20us
500mV

10



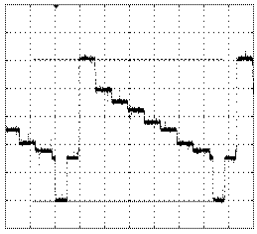
10us
0.5V

11



10us
200mV

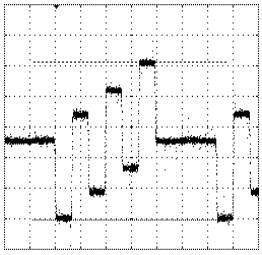
12



AV SWITCH 2

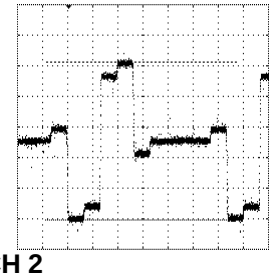
10us
100mV

13



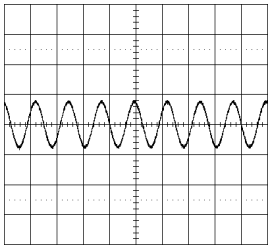
10us
100mV

14



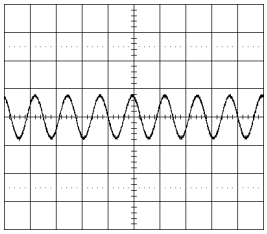
2ms
100mV

15



2ms
100mV

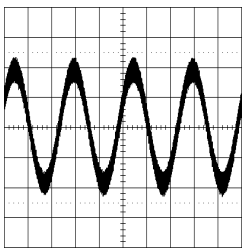
16



SOUND

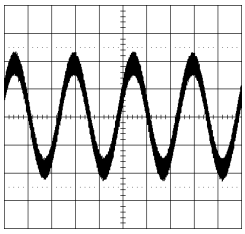
1ms
200mV

17



1ms
200mV

18



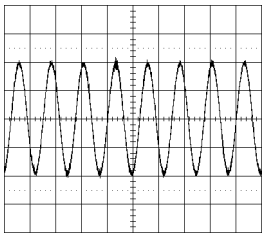
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

JACK

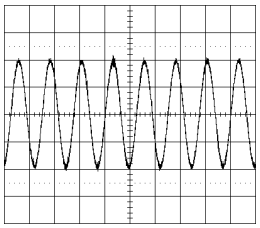
2ms
100mV

19



2ms
100mV

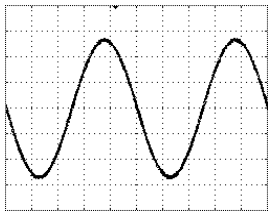
20



AUDIO/VIDEO

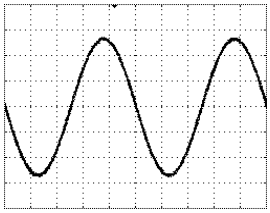
200µs
1.0V

56



200µs
1.0V

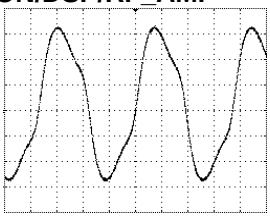
57



MPEG/MICON/DSP/RF_AMP

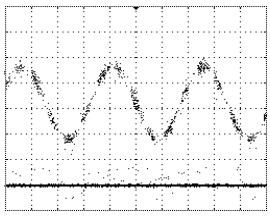
10ns
500mV

52



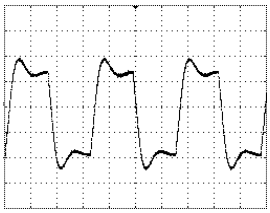
100µs
500mV

53



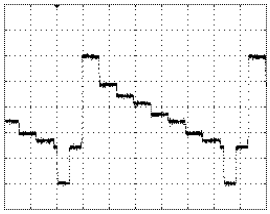
200ns
1.0V

54



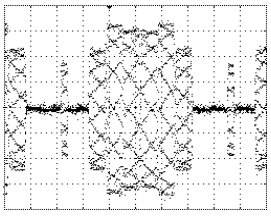
10µs
200mV

58



10µs
100mV

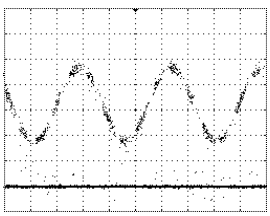
59



MEMORY

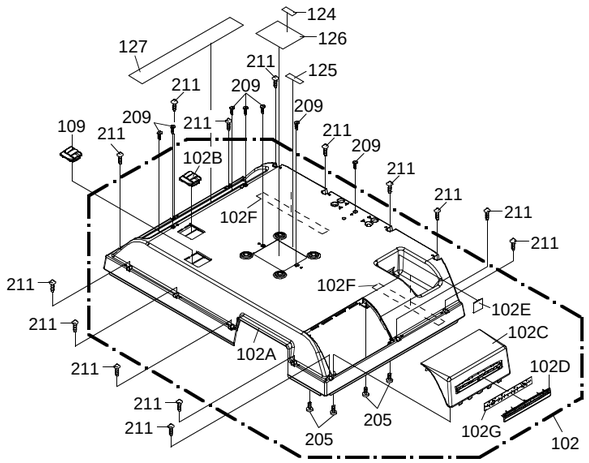
100µs
500mV

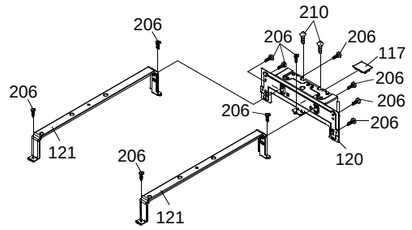
55

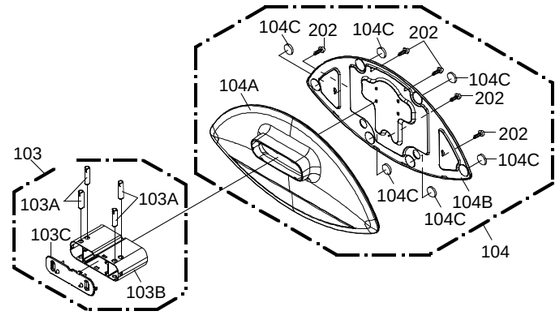


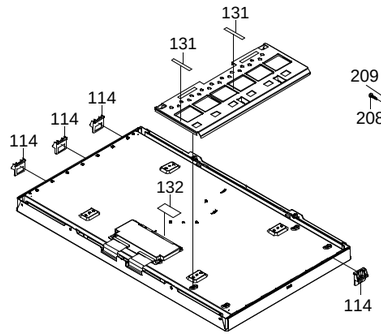
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

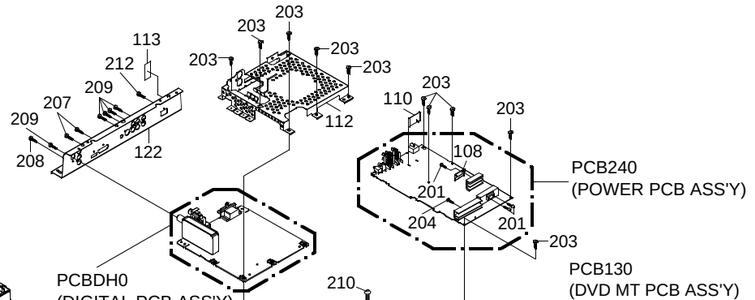
MECHANICAL EXPLODED VIEW

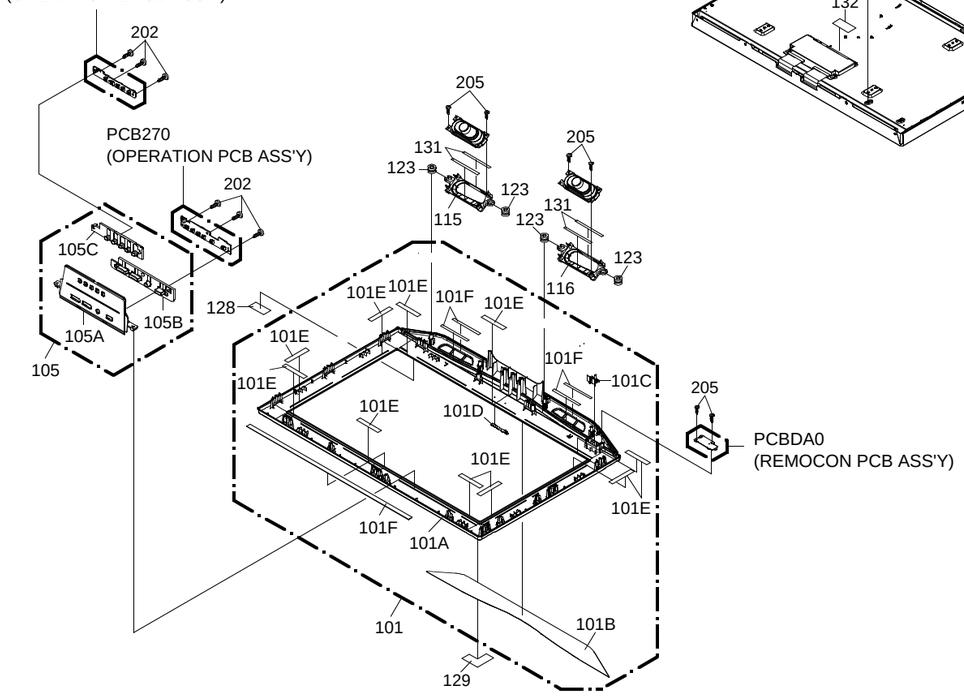


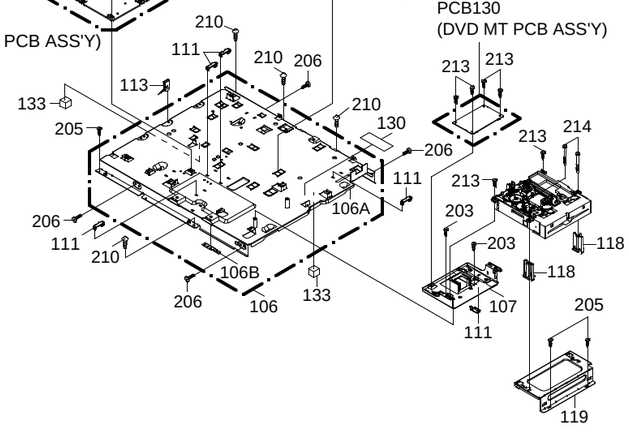




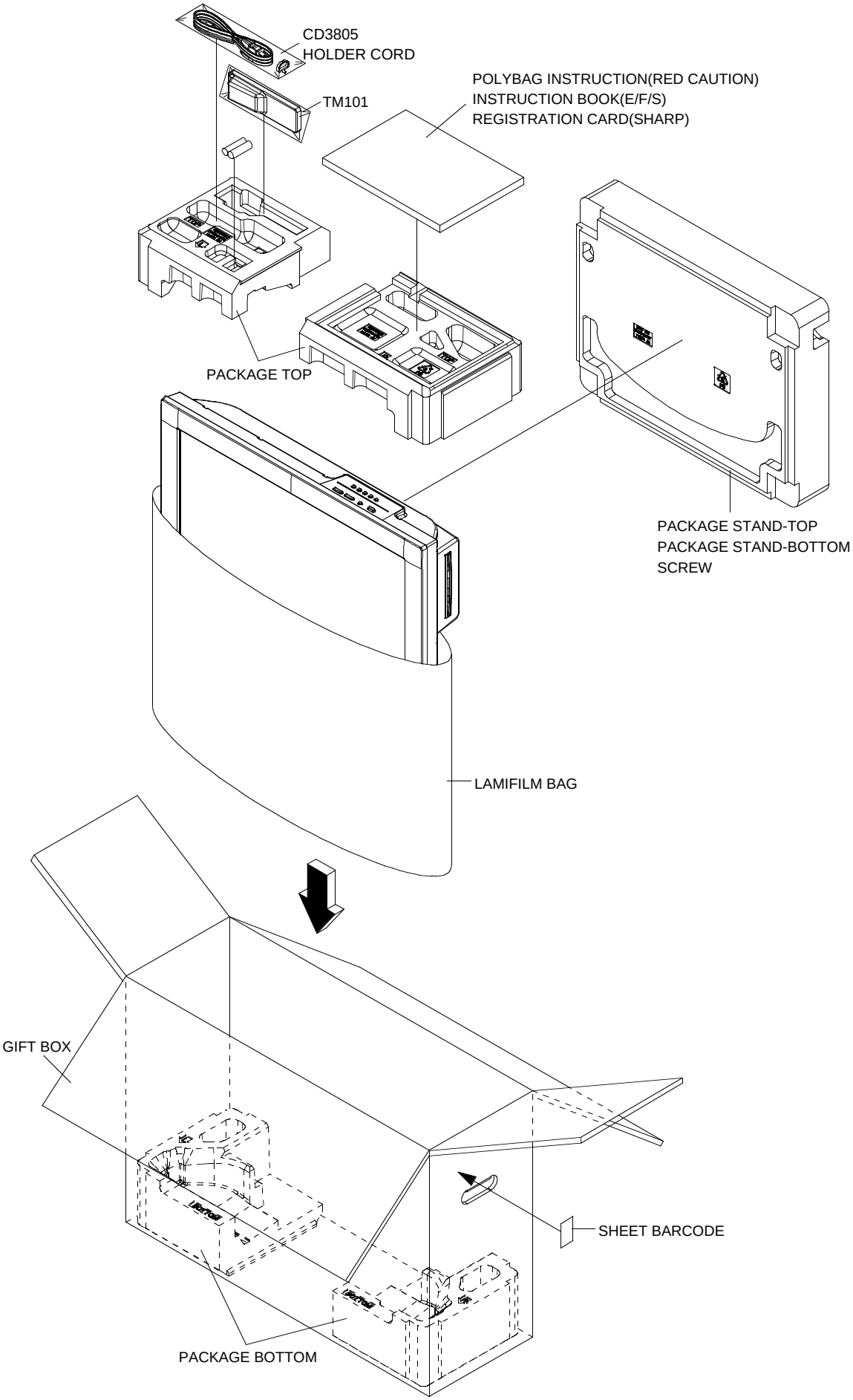




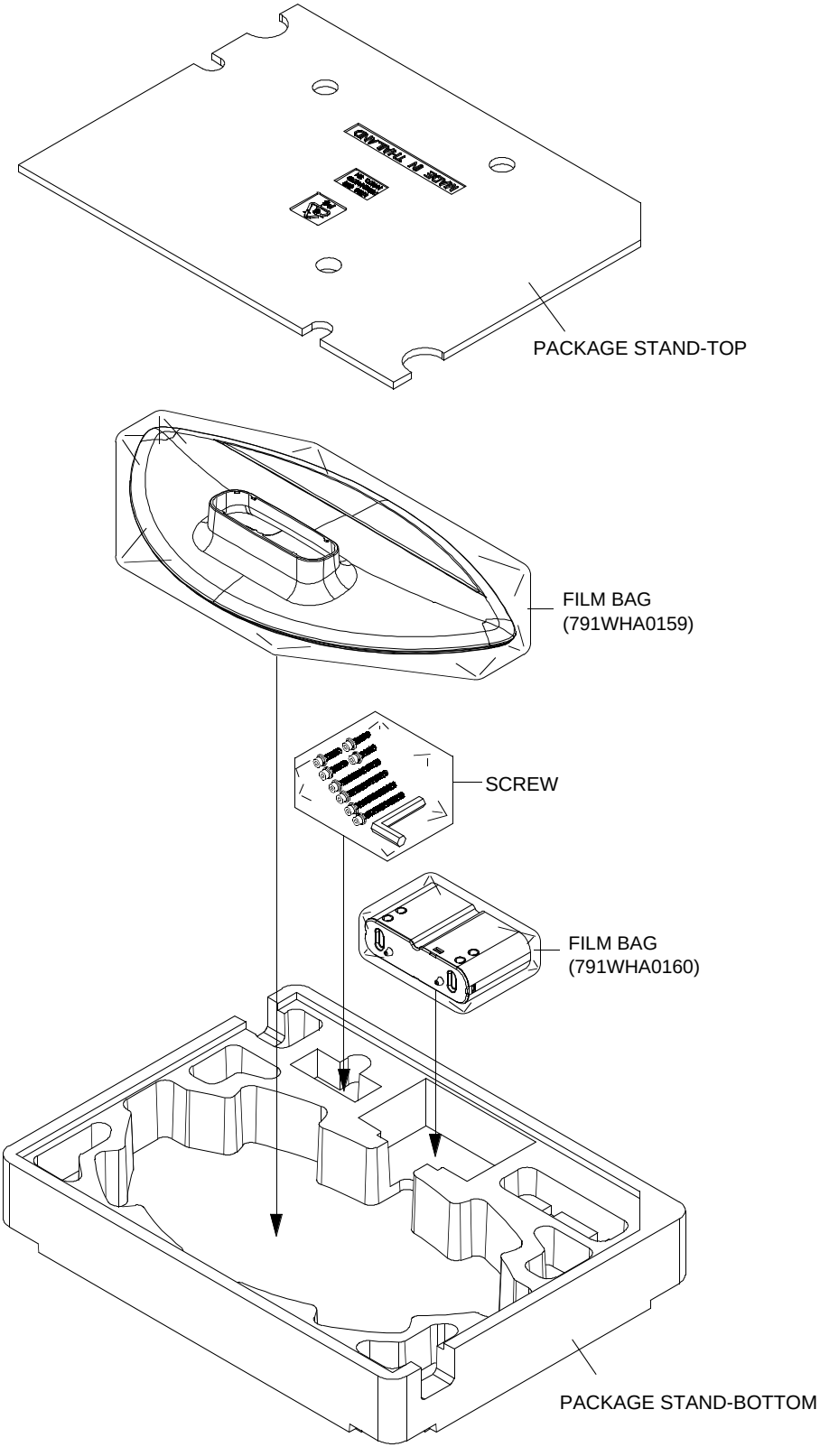




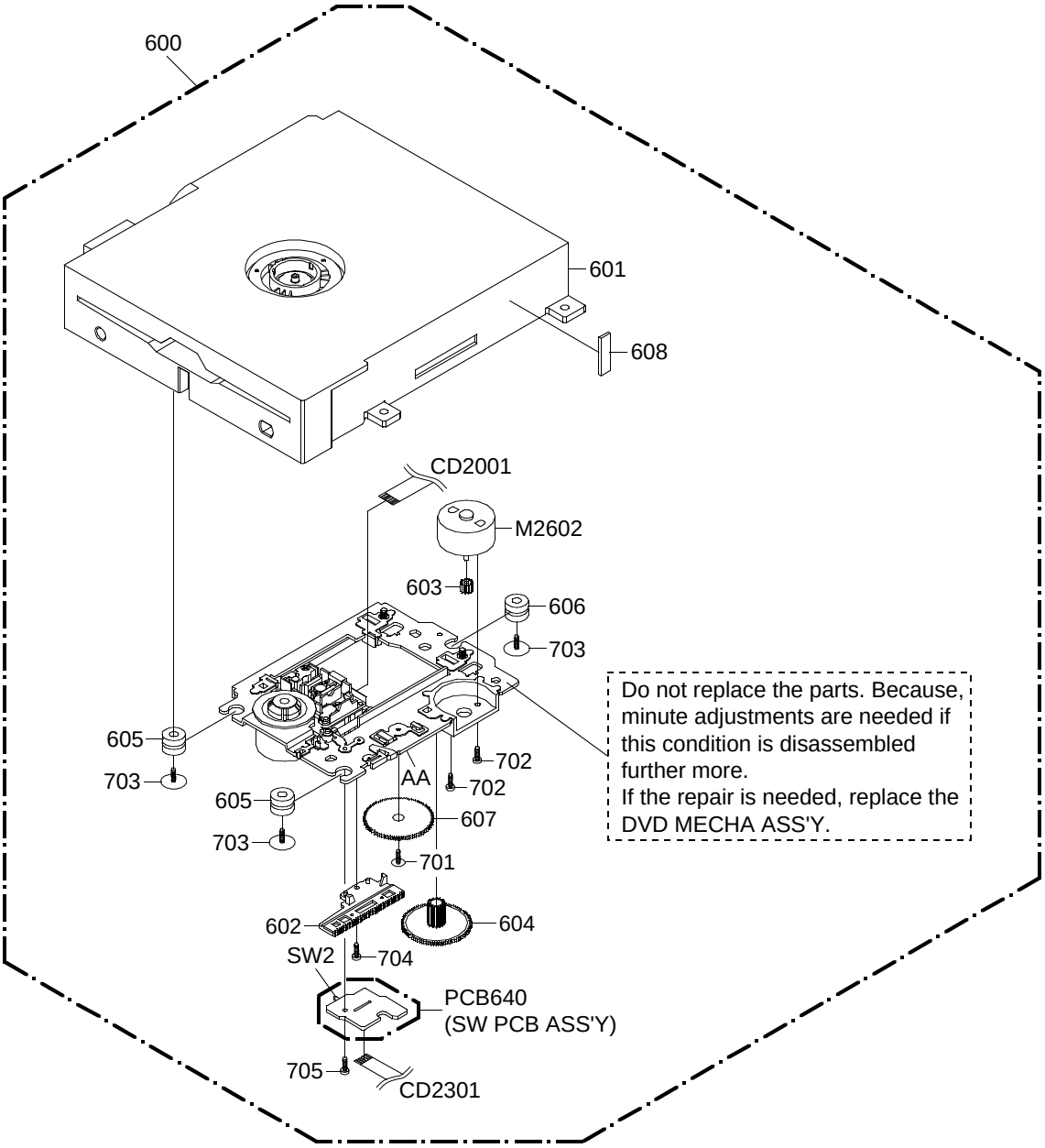
MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



DVD DECK EXPLODED VIEW



CLASS	PART NO.	PART NAME	MARK
GREASE	Y315061000	G-555G	AA

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION	
101	7A708A004A	FRONT CABI ASS'Y	201	810763080U	SCREW TAP TITE(S)	BRAZIER 3x8
101A	708WPJA001	CABINET FRONT	202	811063080U	SCREW TAP TITE(P)	BRAZIER 3x8
101B	702WNA0003	SHEET SPEAKER	203	810923080U	SCREW TAP TITE(B)	BIND 3x8
101C	713WPA0415	GLASS LED	204	8109I30A0U	SCREW TAP TITE(B)	WH7 3x10
101D	7235270066	BADGE BRAND	205	8110630A0U	SCREW TAP TITE(P)	BRAZIER 3x10
101E	800WQ0A110	FELT SHEET	206	810A14080U	SCREW WASHER(A)	M4x8
101F	800WQ00127	FELT SHEET	207	810213080S	SCREW PAN	M3x8
			208	810223040S	SCREW BIND	M3x4
102	7A702A537A	BACK CABI ASS'Y	209	810923080S	SCREW TAP TITE(B)	BIND 3x8
102A	702WPAB210	CABINET BACK				
102B	706WPA0027	COVER CONNECTOR	210	8117540A0U	SCREW TAPPING(B0)	TRUSS 4x10
102C	711WPD0721	PANEL SIDE	211	8110230B5S	SCREW TAP TITE(P)	BIND 3x25
102D	771WPB0085	SLOT DVD	212	810913060S	SCREW TAP TITE(B)	PAN 3x6
102E	706WPA0032	COVER AC INLET	213	810923060U	SCREW TAP TITE(B)	BIND 3x6
102F	800WQ0A113	FELT SHEET	214	8109230D2U	SCREW TAP TITE(B)	BIND 3x42
102G	800WQ00105	FELT SHEET				
			---	792WHA0717	PACKAGE STAND BOTTOM	
103	7A764A008A	FRAME STAND ASS'Y	---	792WHA0718	PACKAGE TOP	
103A	704WPA0081	HOLDER STAND	---	792WHA0719	PACKAGE BOTTOM	
103B	761WEA0035	FRAME STAND	---	792WHA0745	PACKAGE STAND TOP	
103C	761WPA0470	COVER FRAME STAND	---	793WCDD668	GIFT BOX	
			---	89001122A2	SCREW	
104	7A7040033C	STAND ASS'Y	---	723000D773	SHEET BARCODE	
104A	704WPA0078	STAND	---	774WPA0012	HOLDER CORD	
104B	761WSA0465	ANGLE STAND	---	791WHA0159	FILM BAG	
104C	800WFA0120	CUSHION LEG	---	791WHA0160	FILM BAG	
			---	791WHAA204	LAMIFILM BAG 900x700 8 LANGU	
105	7A711A027A	PLATE BUTTON ASS'Y	---	J3Y00417A	REGISTRATION CARD(SHARP)	
105A	711WPD0730	PLATE BUTTON	---	J50Q0131A	INSTRUCTION BOOK(E/F/S)	
105B	735WPB0360	BUTTON FRAME	---	JB5ND000	POLYBAG,INSTRUCTION(RED C/	
105C	735WPB0374	BUTTON FRAME DVD				
106	7G761A047A	COVER LCD ASS'Y				
106A	761WSAA100	COVER LCD				
106B	744WUA0024	SPRING EARTH				
107	761WSA0628	ANGLE MPEG				
108	761WSA0459	SHIELD IC				
109	706WPA0027	COVER CONNECTOR				
110	706WPA0033	PLATE POWER				
111	709WPA0054	HOLDER WIRE				
112	752WSA0705	SHIELD DIGITAL				
113	753WUA0063	SPRING EARTH				
114	761WPAA183	HOLDER PANEL				
115	761WPA0473	HOLDER SPEAKER-L				
116	761WPA0474	HOLDER SPEAKER-R				
117	761WPA0477	COVER HINGE				
118	761WPA0508	HOLDER DVD				
119	761WSAA098	ANGLE DVD-1				
120	761WSA0466	ANGLE HINGE				
121	761WSA0480	ANGLE MAIN				
122	761WSBA015	PLATE JACK				
123	800WR00084	DAMPER SPEAKER				
124	722000A642	SHEET SERIAL				
125	723000D739	MERCURY CAUTION LABEL (SHARP)				
126	723527A117	SHEET RATING				
127	723000D797	SHEET JACK				
128	723000D800	POP LABEL				
129	7230008343	POP LABEL DVD				
130	726000A073	SHEET CAUTION				
131	800WQ00127	FELT SHEET				
132	800WQ00134	FELT SHEET 40x60xT0.5				
133	8965TS1210	CUSHION W10/H12/L10				

DVD DECK REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
⚠ 600	A50N01P650	DVD MECHA ASS'Y	A50N01P650	
601	92SBB0033A	LOADER SUB ASS'Y	DLM1D29-31	
602	92AAA0017A	FEED RACK ASS'Y		
603	92P100088A	GEAR,MOTOR		
604	92P100117A	GEAR,MIDDLE		
605	92P200017A	INSULATOR, F		
606	92P200018A	INSULATOR, R		
607	92P100116A	GEAR,FEED		
608	800WFAA008	CUSHION C		
701	92P700007A	SCREW,GEAR FEED		
702	814011723U	SCREW,PAN	M1.7x2.3 P3	
703	816112080U	SEMS.TAP TITE(P)	PAN W10 2x8	
704	813381750U	SCREW,T-TITE(B)CAMERA	PAN M1.7x5.0 P3	
705	811022080U	SCREW,TAP TITE(P)	BIND 2x8	
CD2001	12C14O1602	CORD JUMPER	FFC05241600408T1-A04	or
CD2001	122J4O1603	CORD JUMPER	127000-2933	
CD2301	122H062102	CORD JUMPER	2H062102	
M2602	1515T98006	MOTOR	WRF-300CA-10460A	or
M2602	1515S98004	MOTOR	BCZ3B05	
PCB640	A5X002C640	SW PCB ASS'Y	DED020A	
SW2	0500101036	PUSH SWITCH	ESE22MH22	

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		REMOCON PCB ASS'Y	
		*** PCB ***	
PCBDA0	A50Q01PDA0	REMOCON PCB ASS'Y	CEG359A
		*** DIODES ***	
D2201	0021E9Q010	LED	LTL-1BEFJ-002A
		*** CONNECTORS ***	
CP2201	069S250639	CONNECTOR PCB SIDE	A2001WR2-5P
		*** OTHERS ***	
OS2201	077A033001	REMOTE RECEIVER	ROM-V338TAO
		DIGITAL PCB ASS'Y	
		*** PCB ***	
PCBDH0	A50Q01PDH0	DIGITAL PCB ASS'Y	CEG352A
		*** RESISTORS ***	
⚠ R3019	R808R9333J	RC	33K OHM 1/16W
		*** DIODES ***	
D3004	D28R1QS040	DIODE	EC31QS04-TE12L
D3401	DGERMA1110	DIODE SILICON	MA111-(TX)
D3405	DGERMA1110	DIODE SILICON	MA111-(TX)
D3406	DGERMA1110	DIODE SILICON	MA111-(TX)
D3604	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3605	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3607	DDLRS160T0	DIODE SCHOTTKY BARRIER	SS160-T
D3610	DGJRT54WS0	DIODE SCHOTTKY BARRIER	BAT54WS
D6201	DE7RB5R62B	DIODE ZENER	UDZSNP5.6B TE-17
D6202	DE7RB5R62B	DIODE ZENER	UDZSNP5.6B TE-17
D6205	DGJRT54WS0	DIODE SCHOTTKY BARRIER	BAT54WS
		*** ICS ***	
IC2801	I56M069540	SCALER	R8J66954BG
IC2802	IGGM061600	256MB DDR2 SDRAM	HYB18TC256160BF-3S
IC2804	S50Q01PF01	MEMORY DATA 32MBIT FLASH 48PIN TSOP	EN29LV320AB-70TCP
IC2805	S50Q01PE01	MEMORY DATA EEPROM 256KBIT SO8	M24256-BWMN6TP
⚠ IC3001	I07F091300	1CH DC-DC CONVERTER	BD9130NV
⚠ IC3002	I1LF010150	DC-DC CONVERTER CONTROLLER	AL1015
⚠ IC3003	I0GF95ZN10	VO=0.8-3.5V I=1.5A TAPING	PQ035ZN1HZPH
IC3004	TJ5MC61080	FET	TPC6108(TE85L,F,M)
IC3601	S50Q01PE02	MEMORY DATA EEPROM 2K SOP8	S-24CS02AFJ-TB-GE
IC3603	I0WF0002A0	2IN1_HDMI_SW_IC	STHDMI002ABTR
IC5801	I01FF58320	USA STEREO	AN5832SA-E1V
IC6201	I9UF032290	RESET IC 2.9V TYPE	PST3229NR
IC6202	S34L01PM01	MEMORY DATA FLASH MICOM ROM16K 2KX2 RAM1	R5F21124FP
IC6551	IC1J053580	A/D CONVERTER	AK5358A
IC6552	I0QF02534V	A/V SW 3INPUT 1OUTPUT	NJM2534V(TE2)
IC6553	I0QF02534V	A/V SW 3INPUT 1OUTPUT	NJM2534V(TE2)
IC6554	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6555	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6556	I5CJ031570	A/V SW 2INPUT 1OUTPUT	SN74LVC1G3157DCKR

ELECTRICAL REPLACEMENT PARTS LIST

*** TRANSISTORS ***

Q3003	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3004	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3401	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3402	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q3403	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3404	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3405	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3406	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3408	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3409	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q3410	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3411	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3412	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3606	T27T030190	FET	2SK3019_TL
Q3607	T27T030190	FET	2SK3019_TL
Q3608	T27T030190	FET	2SK3019_TL
Q3609	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4301	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4303	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q4304	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4306	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4307	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4308	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4310	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4311	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4312	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q5801	T27T030190	FET	2SK3019_TL
Q5802	T27T030190	FET	2SK3019_TL
Q6201	T27T030190	FET	2SK3019_TL
Q6202	T27T030190	FET	2SK3019_TL

*** COILS ***

B2800	024HC51816	CORE,BEADS	HCB1608KF-181T20
B2801	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2803	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2804	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2805	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2806	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2807	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2808	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2809	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2810	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2811	024HC52216	CORE,BEADS	HCB1608KF-221T20
B2813	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2814	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2815	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2816	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2817	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2820	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2821	024HC51216	CORE,BEADS	HCB1608KF-121T20
B2822	024HC51216	CORE,BEADS	HCB1608KF-121T20
B3003	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3004	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3005	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3601	024HC51816	CORE,BEADS	HCB1608KF-181T20
B4301	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4302	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4303	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4304	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4305	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4306	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4308	024HC51513	CORE,BEADS	FCM1608KF-151T06
B4309	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4312	024HC51023	CORE,BEADS	FCM1608KF-102T02

ELECTRICAL REPLACEMENT PARTS LIST

B4313	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4314	024HC51023	CORE,BEADS	FCM1608KF-102T02
B4315	024HC51023	CORE,BEADS	FCM1608KF-102T02
B5802	024HC51023	CORE,BEADS	FCM1608KF-102T02
B5804	024HC51513	CORE,BEADS	FCM1608KF-151T06
B5808	024HC51023	CORE,BEADS	FCM1608KF-102T02
B5809	024HC51023	CORE,BEADS	FCM1608KF-102T02
B6551	024HC51216	CORE,BEADS	HCB1608KF-121T20
B6552	024HC51023	CORE,BEADS	FCM1608KF-102T02
B6553	024HC51023	CORE,BEADS	FCM1608KF-102T02
B6556	024HC51816	CORE,BEADS	HCB1608KF-181T20
L3001	02167E220K	COIL	22 UH
L3002	02167E100K	COIL	10 UH
L3003	0216S8331K	COIL	330 UH
L3004	0216MG220M	COIL	22 UH
L3005	02167E220K	COIL	22 UH
L3401	0216S8331K	COIL	330 UH
L3601	02D1000119	COIL CHOKE	EXC28CG900U
L3602	02D1000119	COIL CHOKE	EXC28CG900U
L4301	0216S8220K	COIL	22 UH
L5801	0216SD220J	COIL	22 UH
L5805	021AS9224J	COIL	0.22 UH
L6551	0216S8220K	COIL	22 UH
		*** JACKS ***	
J4301	060K411055	RCA JACK	AV3-13P2-60S1
		*** CONNECTORS ***	
CP2804	069S2U005A	CONNECTOR PCB SIDE	A2006WR0-2X15P-HK
CP3001	06CK7N0301	CORD CONNECTOR	TWG-P23P-A1
CP3601	0694YJ3038	CONNECTOR PCB SIDE	5-1903015-4
CP4302	06CK7N0301	CORD CONNECTOR	TWG-P23P-A1
CP6202	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
		*** CRYSTAL & CERAMIC OSCILLATORS ***	
X2801	100GT02728	CRYSTAL	SMD-49 C27000B030
X2802	100GT02509	CRYSTAL	SMD-49 C25000H025
X3601	100GT01807	CRYSTAL	SMD-49 C18432B022
X6201	100GT01615	CRYSTAL	B16000E007
X6551	100DT01217	CRYSTAL	DS0321SRAB
		*** TUNER ***	
⚠ TU5801	0164100026	DIGITAL TUNER	ENG36E19KF
		*** NETWORKS ***	
NR2801	11074100M7	R,NETWORK	CRA108100JV
NR2802	11074100M7	R,NETWORK	CRA108100JV
NR2803	11074100M7	R,NETWORK	CRA108100JV
NR2804	11074100M7	R,NETWORK	CRA108100JV
NR2805	11074270M7	R,NETWORK	CRA108270JV
NR2806	11074270M7	R,NETWORK	CRA108270JV
NR2807	11074270M7	R,NETWORK	CRA108270JV
NR2808	11074270M7	R,NETWORK	CRA108270JV
NR2809	11074270M7	R,NETWORK	CRA108270JV
NR2810	11074220M7	R,NETWORK	CRA108220JV
NR2811	11074220M7	R,NETWORK	CRA108220JV
NR6551	11074470M7	R,NETWORK	CRA108470JV
		*** OTHERS ***	
CP2801	06GG290029	CONNECTOR PCB SIDE	A2001WV-9A

ELECTRICAL REPLACEMENT PARTS LIST

CP2803	06GG2C0029	CONNECTOR PCB SIDE	A2001WV-12A
CP4301	06GG2E0019	CONNECTOR PCB SIDE	A2001WR-14A
CP4303	06G8S21504	CONNECTOR PCB SIDE	1B630020
CP6201	06GG2B0029	CONNECTOR PCB SIDE	A2001WV-11A
SH3001	126D000045	TERMINAL PIN	YQ-12
SH3002	126D000045	TERMINAL PIN	YQ-12
SH3003	126D000045	TERMINAL PIN	YQ-12
SH3004	126D000045	TERMINAL PIN	YQ-12
SH3005	126D000045	TERMINAL PIN	YQ-12
		DVD MT PCB ASS'Y	
		*** PCB ***	
PCB130	A50Q01P130	DVD MT PCB ASS'Y	DMG097A
		*** DIODES ***	
D2303	DGERMA1110	DIODE SILICON	MA111-(TX)
D2304	DGERMA1110	DIODE SILICON	MA111-(TX)
D4002	DGERMA1110	DIODE SILICON	MA111-(TX)
D4003	DGERMA1110	DIODE SILICON	MA111-(TX)
D4005	DGERMA1110	DIODE SILICON	MA111-(TX)
D4008	DGERMA1110	DIODE SILICON	MA111-(TX)
D8510	DGERMA1110	DIODE SILICON	MA111-(TX)
		*** ICS ***	
⚠ IC2301	I03FV65650	5CH MOTOR DRIVER IC	LA6565VR-TLM-E
IC4001	ICQK069660	VADDIS9 MPEG/MICON/DSP/RF-AMP	ZR36966ELCG-D or
	ICQK06966A	VADDIS9 MPEG/MICON/DSP/RF-AMP	ZR36966ELCG-D-G
IC4005	IF9J0164AG	1M*16*4BANK SDRAM TSOP54	M12L64164A-7TG
IC4007	ICMJ016017	16M FLASH MEMORY PB FREE	SST39VF1601-70-4C-EKE
IC8501	I0QF045650	DUAL OPEAMP	NJM4565M(TE1)
⚠ IC8502	I1TF911170	VO=1.5-7V IO=1A TAPING	LM1117S-ADJ
		*** TRANSISTORS ***	
Q2301	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q2302	TAAA1544T0	TRANSISTOR SILICON	KTA1544T-RTK/P
		*** COILS ***	
B2304	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B2305	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4001	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4002	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4003	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4005	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4006	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4008	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4010	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4015	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4016	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B8501	024HC51216	CORE,BEADS	HCB1608KF-121T20
B8502	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B8503	024HC51216	CORE,BEADS	HCB1608KF-121T20
B8504	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
L8501	0216SD2R2J	COIL	2.2 UH
L8502	0216SD1R0J	COIL	1 UH
L8504	0216SD1R0J	COIL	1 UH
		*** CONNECTORS ***	
CP2301	069KYOT159	CONNECTOR PCB SIDE	LD07T2-24ND-03

ELECTRICAL REPLACEMENT PARTS LIST

CP2302	069EV5T060	CONNECTOR PCB SIDE	04_6232_105_015_800+
CP2303	069EV6T060	CONNECTOR PCB SIDE	04_6232_106_015_800+
CP8502	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
		*** CRYSTAL & CERAMIC OSCILLATORS ***	
X4001	100GT02727	CRYSTAL	SMD-49 C27000J029
		*** OTHERS ***	
CP8501	06GG2E0019	CONNECTOR PCB SIDE	A2001WR-14A
SH8501	126D000045	TERMINAL PIN	YQ-12
SH8502	126D000045	TERMINAL PIN	YQ-12
SH8503	126D000045	TERMINAL PIN	YQ-12
SH8504	126D000045	TERMINAL PIN	YQ-12
		POWER PCB ASS'Y	
		*** PCB ***	
PCB240	A50Q01P240	POWER PCB ASS'Y	CEG353A
		*** RESISTORS ***	
⚠ R404	RC31X1125J	RC	1.2M OHM 1W
⚠ R406	R3K681S47J	R,METAL OXIDE	0.047 OHM 1W
⚠ R412	R63881R22J	R,FUSE	0.22 OHM 1W
⚠ R416	R65584100J	R,FUSE	10 OHM 1/4W
⚠ R432	R3K781220J	R,METAL OXIDE	22 OHM 1W
⚠ R434	R5X2CE1R2J	R,CEMENT	1.2 OHM 7W
⚠ R445	R002T4101J	RC	100 OHM 1/4W
⚠ R447	R65584150J	R,FUSE	15 OHM 1/4W
R473	R3K78A102J	R,METAL OXIDE	1K OHM 2W
R481	R3K78A102J	R,METAL OXIDE	1K OHM 2W
⚠ R497	R63881010J	R,FUSE	1 OHM 1W
		*** CAPACITORS ***	
C346	E7EYF4471M	CE	470 UF 35V
C349	E7ESF3102M	CE	1000 UF 25V
C350	E7ESF3102M	CE	1000 UF 25V
C401	C0PLRR7E3K	CC	0.0015 UF 2KV R
⚠ C402	P2122B224M	CMP	0.22 UF 275V ECQUL
⚠ C403	E71JFC391D	CE	390 UF 200V
⚠ C404	E71JFC391D	CE	390 UF 200V
⚠ C406	CD39E0MH3M	CC	0.0022UF 250V
⚠ C423	P4NBE5823H	CMPP	0.082 UF 630
C430	C0PLRR7H3K	CC	0.0022 UF 2KV R
⚠ C433	E7EYF4102M	CE	1000 UF 35V
C434	E7EYF4122M	CE	1200 UF 35V
⚠ C435	E7EYF3102M	CE	1000 UF 25V
⚠ C438	E7EYF4122M	CE	1200 UF 35V
C440	E7EYF0222M	CE	2200 UF 6.3V
⚠ C441	E8E2U52R2D	CE	2.2 UF 50V
⚠ C442	E7ESU5470M	CE	47 UF 50V
⚠ C444	E7EPT0222M	CE	2200 UF 6.3V
⚠ C448	P2122B224M	CMP	0.22 UF 275V ECQUL
⚠ C453	E7EYF2102M	CE	1000 UF 16V
⚠ C455	E8E6FC470M	CE	47 UF 200V
⚠ C462	E7EYF2102M	CE	1000 UF 16V
⚠ C464	CD39E0MH3M	CC	0.0022UF 250V
⚠ C500	E7EPU3101M	CE	100 UF 25V
⚠ C502	E7EPU2101M	CE	100 UF 16V

ELECTRICAL REPLACEMENT PARTS LIST

*** DIODES ***

	D401	D97U03301B	DIODE,ZENER	MTZJ33B T-77
⚠	D404	D6CE24110A	DIODE VARISTA	ENE241D-10A-Q6
⚠	D405	D4CKN54060	DIODE SILICON	1N5406FL-6737
	D406	D28R1QS040	DIODE	EC31QS04-TE12L
⚠	D407	D4CKN54060	DIODE SILICON	1N5406FL-6737
	D408	D1VT001330	DIODE,SILICON	1SS133T-77
	D410	D1VT001330	DIODE,SILICON	1SS133T-77
	D411	D1VT001330	DIODE,SILICON	1SS133T-77
	D412	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
	D413	D97U03001B	DIODE,ZENER	MTZJ30B T-77
⚠	D415	D2WXN40050	DIODE SILICON	1N4005-EIC
⚠	D416	D28F31DQ06	DIODE,SILICON	31DQ06-FC
	D417	D28R1QS040	DIODE	EC31QS04-TE12L
	D418	D2WXN40050	DIODE SILICON	1N4005-EIC
	D421	D28R1QS040	DIODE	EC31QS04-TE12L
	D424	D97U03R31B	DIODE,ZENER	MTZJ3.3B T-77
	D425	D97U02701B	DIODE,ZENER	MTZJ27B T-77
	D426	D1VT001330	DIODE,SILICON	1SS133T-77
	D427	D97U02701B	DIODE,ZENER	MTZJ27B T-77
	D432	D4AT106FE0	DIODE RECTIFIER	RL106F-E
	D433	D4AT01H3E0	DIODE RECTIFIER	1H3-E
⚠	D435	D2CFC91020	DIODE SILICON	ERC91-02J11SC
	D437	D28AH10A20	DIODE SCHOTTKY BARRIER	FCH10A20
⚠	D440	D2CA2C15R0	DIODE SCHOTTKY BARRIER	YG862C15R
⚠	D442	D4AT01H3E0	DIODE RECTIFIER	1H3-E
⚠	D443	D28F31DQ09	DIODE SCHOTTKY	31DQ09-FC
⚠	D444	D2LT001F50	DIODE SILICON	1F5-E
	D445	D97U01501B	DIODE,ZENER	MTZJ15B T-77
	D4207	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4209	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4210	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4211	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4212	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4213	DE7RB1202B	DIODE ZENER	UDZSNP12B TE-17
	D4214	D1VT001330	DIODE,SILICON	1SS133T-77

*** ICS ***

⚠	IC302	I0FSP7808B	SOUND AMP STEREO	AN17808B
⚠	IC401	I2GT050380	VDS=500V RDS1=0.77 RDS2=0.38	MP3A5038
⚠	IC402	I5SD0P2F40	VD=700V RDS(ON)=9.5OHM	MIP2F4
⚠	IC403	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
⚠	IC404	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
⚠	IC405	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠	IC406	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠	IC407	I03T057790	VIN=30V I0=3A	LA5779-E
⚠	IC408	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
	IC409	I1KA97809A	9V REGULATOR 1A	KIA7809API
⚠	IC410	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
	IC411	I5HJ0170B0	REGULATOR VO=3.3V IO=800MA	S-1170B33UC-OTSTFG
	IC412	TJ7T35P020	FET	RTQ035P02-TR
	IC413	I03F957950	1CH STEP DOWN DC-DC CONTROL	LV5795-TE-L-E
	IC6502	I0QF027500	4INPUT 1OUTPUT AUDIO SW	NJM2750M(TE1)

*** TRANSISTORS ***

	Q307	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
	Q401	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
	Q403	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
	Q404	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
	Q405	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
	Q406	TC5T021204	TRANSISTOR,SILICON	2SC2120Y(TPE2)
⚠	Q407	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
	Q408	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK

ELECTRICAL REPLACEMENT PARTS LIST

Q409	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q410	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q411	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q412	TJ5AK302T0	FET	SSM3K302T(TE85L,F)
Q416	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q417	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q418	T67J017590	TRANSISTOR SILICON	2SA1759_T100
Q420	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q421	TNAAA05001	COMPOUND TRANSISTOR	KRC101S-RTK
Q422	TBA0011510	TRANSISTOR SILICON	KTB1151
Q423	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q424	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q425	TJ5AK302T0	FET	SSM3K302T(TE85L,F)
Q4211	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q4212	TPAAC05002	COMPOUND TRANSISTOR	KRA103SRTK
		*** COILS ***	
B401	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B404	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
⚠ L401	029X000167	COIL,LINE FILTER	SS30V-R200132
L402	029X000166	COIL,LINE FILTER	SS11V-R22020-CH
L403	021U0L220M	COIL	22 UH
L404	02167E220K	COIL	22 UH
L408	021U0L470M	COIL	47 UH
L411	02167E100K	COIL	10 UH
L413	02167E100K	COIL	10 UH
		*** TRANSFORMERS ***	
⚠ T401	0481400854	TRANSFORMER,SWITCHING	81400854
⚠ T402	0481190084	TRANSFORMER,SWITCHING	81190084
		*** JACKS ***	
J401	064A1A0005	SOCKET,AC	YKE31-0149N
J4201	060J131019	HEADPHONE JACK	MSJ-2000B_AG(O87)
J4202	063Y700014	JACK	DIN-409B
J4203	060K411053	RCA JACK	AV3-13P2-31S1
J4205	060R431035	RCA JACK	RCA-349-00C-02
J4206	060R431035	RCA JACK	RCA-349-00C-02
		*** CONNECTORS ***	
CP401	06977NM020	CONNECTOR PCB SIDE	127301123K2
CP403	069S280639	CONNECTOR PCB SIDE	A2001WR2-8P
CP404	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP4201	069S250639	CONNECTOR PCB SIDE	A2001WR2-5P
CP4203	06977NM020	CONNECTOR PCB SIDE	127301123K2
		*** FUSES ***	
⚠ F401	081PC6R305	FUSE	51MS063L
⚠ F404	0835C02003	MICRO FUSE	20N_2000FS
FH401	06710T0009	HOLDER,FUSE	EYF-52BCY
FH402	06710T0009	HOLDER,FUSE	EYF-52BCY
		*** OTHERS ***	
CP302	06GG140019	CONNECTOR PCB SIDE	A2502WR-4A
CP406	06GG2E0019	CONNECTOR PCB SIDE	A2001WR-14A
EL2401	124116281A	EYE LET	XRY16X28BD
EL2402	124120301A	EYE LET	XRY20X30BD
SH402	126D000045	TERMINAL PIN	YQ-12

ELECTRICAL REPLACEMENT PARTS LIST

SH404	126D000045	TERMINAL PIN	YQ-12
SH406	126D000045	TERMINAL PIN	YQ-12
SH407	126D000045	TERMINAL PIN	YQ-12
SH410	126D000045	TERMINAL PIN	YQ-12
		OPERATION PCB ASS'Y	
		*** PCB ***	
PCB270	A50Q01P270	OPERATION PCB ASS'Y	CEG358A
		*** SWITCHES ***	
SW2201	0504101T34	SWITCH,TACT	EVQ21505R
SW2202	0504101T34	SWITCH,TACT	EVQ21505R
SW2203	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	0504101T34	SWITCH,TACT	EVQ21505R
SW2205	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	0504101T34	SWITCH,TACT	EVQ21505R
		*** CONNECTORS ***	
CP2203	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
CP2204	06CU221603	CORD CONNECTOR	CU221603
		OPERATION 2 PCB ASS'Y	
		*** PCB ***	
PCB280	A50Q01P280	OPERATION 2 PCB ASS'Y	CEG361A
		*** SWITCHES ***	
SW2251	0504101T34	SWITCH,TACT	EVQ21505R
SW2252	0504101T34	SWITCH,TACT	EVQ21505R
SW2253	0504101T34	SWITCH,TACT	EVQ21505R
SW2254	0504101T34	SWITCH,TACT	EVQ21505R
SW2255	0504101T34	SWITCH,TACT	EVQ21505R
		*** CONNECTORS ***	
CP2251	069S220639	CONNECTOR PCB SIDE	A2001WR2-2P
		AND OTHERS	
		*** CONNECTORS ***	
CD2202	06CU233301	CORD CONNECTOR	CU233301
CD2804	06CURU1704	CORD CONNECTOR	CURU1704
CD8501	06CU2E2701	CORD CONNECTOR	CU2E2701
CD8502	06CU282701	CORD CONNECTOR	CU282701
		*** AC CORD ***	
CD3805	120Q119906	CORD SET AC	P201-2739-1
		*** OTHERS ***	
BT001	141R003018	BATTERY,MANGAN	GR6M
BT002	141R003018	BATTERY,MANGAN	GR6M
CD301	06E8144301	CORD CONNECTOR	E8144301
CD406	06E82E1301	CORD CONNECTOR	E82E1301
CD2201	06E8253101	CORD CONNECTOR	E8253101
CUS151	800WFAA006	CUSHION A	
⚠ SP301	070Y056007	SPEAKER	S0412F06

ELECTRICAL REPLACEMENT PARTS LIST

⚠	SP302	070Y056007	SPEAKER	S0412F06
	TM101	076B0MR030	TRANSMITTER	ETR0088-010171
⚠	V2301	09EV126010	LCD	V260B1-L01_M

RESISTOR

RC..... CARBON RESISTOR

CAPACITORS

CC..... CERAMIC CAPACITOR
CE..... ALUMI ELECTROLYTIC CAPACITOR
CP..... POLYESTER CAPACITOR
CPP..... POLYPROPYLENE CAPACITOR
CPL..... PLASTIC CAPACITOR
CMP..... METAL POLYESTER CAPACITOR
CMPL..... METAL PLASTIC CAPACITOR
CMPP..... METAL POLYPROPYLENE CAPACITOR

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